RHODE ISLAND DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
Office of Water Resources

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Date Received _____

RIPDES SMALL MS4 ANNUAL REPORT

GENERAL INFORMATION PAGE

RIPDES PERMIT #RIR040027

REPORTING PERIOD: ☒ [redacted]**EAR 20**

Jan 2023-Dec 2023

OPERATOR OF MS4

Name: *Town of Scituate – Department of Public Works*			
Mailing Address: *Scituate Department of Public Works, 1 Lincoln Circle, Scituate, RI 02857*			
City: *Scituate*	State: *RI*	Zip: 02857	Phone: *(401) 647-3366*
Contact Person: *Mr. Kirk Loiselle*	Title: *Director of Public Works*		
	Email: *kloiselle@scituateri.org*		

Legal status (circle one):
PRI - Private (PUB - Public) BPP - Public/Private STA - State FED – Federal
Other (please specify):

OWNER OF MS4 (if different from OPERATOR)

Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
Contact Person:	Title:		
	Email:		

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name *Mr. Kirk Loiselle*

Print Title *Director of Public Works*

Signature _____ Date _____

MINIMUM CONTROL MEASURE #1:
PUBLIC EDUCATION AND OUTREACH (Part IV.B.1 General Permit)

SECTION I. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as activities, topics addressed, audiences and pollutants targeted. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for choosing the education activity to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

Responsible Party Contact Name & Title: *Mr. Kirk Loiselle, Director of Public Works*

Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

IV.B.1.b.1	Use the space below to provide a General Summary of activities implemented to educate your community on how to reduce stormwater pollution. For TMDL affected areas, with stormwater associated pollutants of concern, indicate rationale for choosing the education activity. List materials used for public education and topics addressed. Summarize implementation status and discuss if the activity is appropriate and effective.

The Town maintains a municipal website (www.scituateri.org). The Department of Public Works subpage includes information on waste disposal accepted at the Town's Public Works Facility, and waste disposal events in Town. Information is provided on specific solid waste disposal options and locations, including electronic waste, recyclables, yard waste and mattresses. In addition, links are provided to the Rhode Island Resource Recovery website (Central Landfill) for additional information. Finally, the Town held an Earth Day Cleanup event on April 22, 2023 to cleanup litter and debris in and around the Scituate Town Center. Pamphlets, t-shirts, and other waste disposal information was made available at the event. The advertisement from the Valley Breeze is included in Attachment A.

IV.B.1.b.2	Use the space below to provide a general summary of how the public education program was used to educate the community on how to become involved in the municipal or statewide stormwater program. Describe partnerships with governmental and non-governmental agencies used to involve your community.

The Town's website, specifically the Public Works subpage, provides information on where various forms of solid waste and recyclables can be suitably disposed of. This effort helps minimize the potential for illegal disposal of solid waste and materials which may find its way into waters of the State. As noted, the Town's website includes links to the RIRR website which provides additional governmental information on solid waste disposal and recycling in the State of RI. Finally, the Town held an Earth Day Cleanup event on April 22, 2023 to cleanup litter and debris in and around the Scituate Town Center. Pamphlets, t-shirts, and other waste disposal information was made available at the event. The advertisement from the Valley Breeze is included in Attachment A.

Developers proposing new projects in the Town are required to submit suitable Soil Erosion and Sediment Control Plans through the Land Development process in compliance with the RI Stormwater Design and Installation Standards Manual (amended March 2015) and the RI Soil Erosion and Sediment Control Handbook.

Check all topics that were included in the Public Education and Outreach program during this reporting period. For each of the topics selected, provide:
Target Audience(s): Public Employees, Residents, General Public, Businesses, Industries, Restaurants, Contractors, Developers, Agriculture, Other (describe);
Target Pollutant(s): (e.g. pet waste, fertilizers, Total Suspended Solids, etc.);
Strategies/Media: Direct Mailings, List Servs, Kiosks or Other Displays, Newspaper Ads or Articles, Public Events or Presentations, School Programs, Printed Materials, Direct Trainings, Videos, Webpage, Other (describe)

Topic	Target Audience(s)	Target Pollutant(s)	Strategies/Media
☒ Construction Sites	Developers/Contractor	Silt/sediment	Plan reviews
☐ Pesticide and Fertilizer Application			
☐ General Stormwater Management Info			
☒ Pet Waste Management	Residents	Pet waste	Displays in parks
☐ Household Hazardous Waste Disposal			
☒ Recycling	Residents/businesses	Trash/solid waste	Town website
☐ Illicit Discharge Detection and Elimination			
☒ Riparian Corridor Protection/Restoration	Residents/businesses	WS awareness	Printed displays
☐ Infrastructure Maintenance			
☐ Trash Management			
☐ Smart Growth			
☐ Vehicle Washing			
☐ Storm Drain Marking			
☐ Water Conservation			
☒ Green Infrastructure/Better Site Design/LID	Developers	TSS, silt/sediment	Pre-app meetings
☐ Wetland Protection			
☐ Other:			
☐ None			

Additional Measurable Goals and Activities

Please list all stormwater training attended by your staff during the 2023 calendar year and list the name(s) and position of all staff who attended the training.

Trainings:

MINIMUM CONTROL MEASURE #2:
PUBLIC INVOLVEMENT/PARTICIPATION (Part IV.B.2 General Permit)

SECTION I. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as types of activities and audiences/groups engaged. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

Responsible Party Contact Name & Title: *Mr. Kirk Loiselle, Director of Public Works*

Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

IV.B.2.b.2.ii	Use the space below to describe audiences targeted for the public involvement minimum measure, include a description of the groups engaged, and activities implemented and if a particular pollutant(s) was targeted. If addressing TMDL requirements indicate how the audience(s) and/or activity address the pollutant(s) of concern. Name of person(s) and/or parties responsible for implementation of activities identified. Assess the effectiveness of BMP and measurable goal.

The Town maintains an active recycling program and disposal program. The DPW accepts specific waste, including mattresses, propane tanks, and oil. In addition, the DPW accepts yard waste. Information is posted on the Towns website: http://www.scituateri.org/departments/public_works/index.php.

Opportunities provided for public participation in implementation, development, evaluation, and improvement of the Stormwater Management Program Plan (SWMPP) during this reporting period. Check all that apply:

- ☒ Cleanup Events
- ☐ Comments on SWMPP Received
- ☐ Community Hotlines
- ☐ Community Meetings
- ☐ Other (describe)
- ☐ Storm Drain Markings
- ☐ Stakeholder Meetings
- ☐ Volunteer Monitoring
- ☐ Plantings

Additional Measurable Goals and Activities

SECTION II. Public Notice Information (Parts IV.G.2.h and IV.G.2.i) *Note: attach copy of public notice

Was the availability of this Annual Report and the Stormwater Management Program Plan (SWMPP) announced via public notice? ☐ YES ☐ NO	If YES, Date of Public Notice:

How was public notified:

- ☐ List-Serve (Enter # of names in List: _____)
- ☐ TV/Radio Notices
- ☐ Website
- ☐ Newspaper Advertising
- ☐ Town Hall posting
- ☐ Other:

Enter Web Page URL: _____

Was public meeting held? ☐ YES ☐ NO

Date: Where:

Summary of public comments received: None

Planned responses or changes to the program: None

MINIMUM CONTROL MEASURE #3:
ILLICIT DISCHARGE DETECTION AND ELIMINATION (Part IV.B.3 General Permit)

SECTION I. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS

Include information relevant to the implementation of each measurable goal, such as activities implemented (when reporting tracked and eliminated illicit discharges, please explain the rationale for targeting the illicit discharge) to comply with on-going requirements, and illicit discharge public education activities, audiences and pollutants targeted. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

Responsible Party Contact Name & Title: *Mr. Kirk Loiselle, Director of Public Works*

Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

Has *this person* received training on Illicit Discharge Detection and Elimination (IDDE)? *No*

If yes, when and where? *Not applicable*

If no, who *is* trained on IDDE? *Town's Engineering Consultant, Joe Casali Engineering, Inc.*

IV.B.3.b.1:	If the outfall map was not completed, use the space below to indicate reasons why, proposed schedule for completion of requirement and person(s)/ Department responsible for completion. (The Department recommends electronic submission of updated EXCEL Tables if this information has been amended.) **Number of Outfalls Mapped within regulated area:** 30 **Percent Complete:** 100% **If 100% Complete, Provide Date of Completion:** May 2023
Outfall mapping been fully completed; thirty (30) outfalls were located in April and May 2023.	
IV.B.3.b.2	Indicate if your MS4 chose to implement the tagging of outfalls activity under the IDDE minimum measure, activities and actions undertaken under the 2023 calendar year.
All outfall locations were survey located with a Carlson BRX-7 GPSRover as part of the outfall mapping completed May 2023.	
IV.B.3.b.3	Use the space below to provide a summary of the implementation of recording of system additional elements (catch basins, manholes, and/or pipes). Indicate if the activity was implemented as a result of the tracing of illicit discharges, new MS4 construction projects, and inspection of catch basins required under the IDDE and Pollution Prevention and Good Housekeeping Minimum Measures, and/or as a result of TMDL related requirements and/or investigations. Assess effectiveness of the program minimizing water quality impacts.
All outfall locations were survey located with a Carlson BRX-7 GPSRover as part of the outfall mapping and observation of the outfalls conditions and flow were documented and completed May 2023.	
IV.B.3.b.4	Indicate if the IDDE ordinance was **not** developed, adopted, and submitted to RIDEM, explain reasons why, submit proposed schedule for completion and identify person(s) / Department and/or parties responsible for the completion of this requirement. **Date of Adoption:** *August 2023* If the Ordinance was amended in 2023, please indicate why changes were necessary.
The Town has drafted and adopted a new "Ordinance Amending Chapter 12, Soil Erosion and Sedimentation Control". This new Ordinance includes subsections relative to "Soil Erosion and Sediment Control ("SESC") Plan", "Post-Construction Stormwater Control", and "Illicit Discharge of Stormwater". A copy of the Ordinance is included in Attachment B.	
IV.B.3.b.5.ii, iii, iv, & v	Use the space below to provide a summary of the implementation of procedures for receipt and consideration of complaints, tracing the source of an illicit discharge, removing the source of the illicit discharge and program evaluation and assessment as a result of removing sources of illicit discharges. Identify person(s) / Department and/or parties responsible for the implementation of this requirement.
Presently, if an illicit discharge is reported to the DPW or observed by the DPW, appropriate measures are immediately taken to address and eliminate the illicit discharge. All outfalls were inspected during the wet season in 2023, further discussed below. The Town has drafted and adopted a new "Ordinance Amending Chapter 12, Soil Erosion and Sedimentation Control". This new Ordinance includes subsections relative to "Soil Erosion and Sediment Control ("SESC") Plan", "Post-Construction Stormwater Control", and "Illicit Discharge of Stormwater". A copy of the Ordinance is included in Attachment B.	

IV.B.3.b.5.vi	Use the space below to provide summary of implementation of catch basin and manhole inspections for illicit connections and non-stormwater discharges. If the required measurable goal of inspecting all catch basins and manholes for this purpose was not accomplished, please indicate reasons why, the proposed schedule of completion and identify person(s) / Department and/or parties responsible for the implementation of this requirement. Evaluate effectiveness of the implementation of this requirement. The operator must keep records of all inspections and corrective actions required and completed. **Number of Catch Basins and Manholes Inspected for illicit connections/IDDE:** *0* **Percent Complete:** *0%* **Date of Completion:** *Not Applicable*
The Town prioritized cleaning and inspections to structures most sensitive to filling with debris.	
IV.B.3.b.5.vii	If dry weather surveys including field screening for non-stormwater flows and field tests of selected parameters and bacteria were not completed, indicate reasons why, proposed schedule for the completion of this measurable goal and person(s) / Department and/or parties for the completion of this requirement. Evaluate effectiveness of the implementation of this requirement. **The results of the dry weather survey investigations should be submitted to RIDEM electronically, if not already submitted or if revised since 2009, in the RIDEM-provided EXCEL Tables and should include visual observations for all outfalls during both the high and low water table timeframes, as well as sampling results for those outfalls with flow. The EXCEL Tables must include a report of all outfalls and indicate the presence or absence of dry weather discharges.** **Number of Outfalls Surveyed Jan-Apr:** *30* **Number of Outfalls Surveyed Jul-Oct:** *0* **Percent Complete:** *50%* **Date of Completion:** *April/May 2023*
The Town completed wet season (high-water table) inspection of 30 outfalls during April/May 2023. Several potential instances of illicit discharges were identified as part of the inspection. Those potential illicit discharges are being further investigated. Dry season inspections are scheduled to be completed by the DPW and the Town's Consultant in Summer 2024. A copy of the wet season inspections and results memorandum is included in Attachment C.	
IV.B.3.b.7	Use the space below to provide a description of efforts and actions taken as a result of for coordinating with other physically interconnected MS4s, including State and federal owned or operated MS4s, when illicit discharges were detected or reported. Identify person(s) / Department and/or parties responsible for the implementation of this requirement. Evaluate effectiveness of the implementation of this requirement.
There are no known interconnected MS4s within the Town of Scituate. Therefore, the Town did not take any actions regarding coordination with other physically interconnected MS4s. The DPW and Town Engineer's office is responsible for any necessary coordination.	
IV.B.3.b.8	Use the space below to provide a description of efforts and actions taken for the referral to RIDEM of non-stormwater discharges not authorized in accordance to Part I.B.3 of this permit or another appropriate RIPDES permit, which the operator has deemed appropriate to continue discharging to the MS4, for consideration of an appropriate permit. Identify person(s) / Department and/or parties responsible for the implementation of this requirement. Evaluate effectiveness of the implementation of this requirement.
No specific non-stormwater discharges were observed or reported during the 2023 reporting year. Therefore, the Town did not take any specific action. The DPW and the Town Engineer's office will be responsible for coordination with RIDEM regarding referral to RIDEM of non-stormwater discharges not authorized by another specific RIDEM permit.	
IV.B.3.b.9	Use the space below to provide a description of efforts and actions taken to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste, as well as allowable non-stormwater discharges identified as significant contributors of pollutants. Include a description on how this activity was coordinated with the public education minimum measure and the pollution prevention/good housekeeping minimum measure programs. Identify person(s) / Department and/or parties responsible for the implementation of this requirement. Evaluate effectiveness of the implementation of this requirement.
No specific actions taken.	
Additional Measurable Goals and Activities	

SECTION II.A Other Reporting Requirements - Illicit Discharge Investigation and System Mapping (Part IV.G.2.m)

# of Illicit Discharges Identified in 2023: *3 (potential)*	# of Illicit Discharges Tracked in 2023: *3 (potential)*
# of Illicit Discharges Eliminated in 2023: *0*	# of Complaints Received: *0*
# of Complaints Investigated: *0*	# of Violations Issued: *0*
# of Violations Resolved: *0*	# of Unresolved Violations Referred to RIDEM: *0*
Total # of Illicit Discharges Identified to Date (since 2003): *3*	Total # of Illicit Discharges remaining unresolved at the end of 2023: *3*
Summary of Enforcement Actions: *None Taken*	
Total # of Outfalls identified and mapped to date: *30 (April/May 2024)* Total # of Interconnections with other MS4s identified and mapped to date: *0* Extent to which the MS4 system has been mapped (% complete): *50% - all thirty (30) outfall locations were survey located with a Carlson BRX-7 GPSRover as part of the outfall mapping completed May 2023. Catch basin/drain manhole mapping is not completed.*	

Identify how the following components of the MS4 system have been mapped:	Not mapped	GIS	Auto CAD	Paper	Other (please specify)
Catch basins	☐	☐	☐	☒	☐
Manholes	☐	☐	☐	☒	☐
Pipes, ditches, and other conduits	☒	☐	☐	☐	☐
Flow direction and connectivity	☒	☐	☐	☐	☐
Interconnections with other regulated MS4s	☐	☐	☐	☐	☒ *Not applicable*
MS4-owned stormwater controls (BMPs, not including catch basins or manholes)	☐	☐	☒	☒	☐
Delineation of outfall catchment/drainage areas	☐	☒	☒	☐	☐

SECTION II.B Interconnections (Parts IV.G.2.k and IV.G.2.l)

Interconnection:	Date Found:	Location:	Name of MS4:	Originating Source:	Planned and Coordinated Efforts and Activities with Connectee:
Not Applicable					

MINIMUM CONTROL MEASURE #4:
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL
(Part IV.B.4 General Permit)

SECTION I. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as activities implemented to support the review, issuance and tracking of permits, inspections and receipt of complaints. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

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Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

IV.B.4.b.1	Indicate if the Sediment and Erosion Control and Control of Other Wastes at Construction Sites ordinance was **not** developed, adopted, and submitted to RIDEM, explain reasons why, submit proposed schedule for completion and identify person(s) / Department and/or parties responsible for the completion of this requirement. **Date of Adoption:** August 2023 If the Ordinance was amended in 2023, please indicate why changes were necessary and provide references to the amended portions of the local codes/ordinances.
The Town has drafted and adopted a new "Ordinance Amending Chapter 12, Soil Erosion and Sedimentation Control". This new Ordinance includes subsections relative to "Soil Erosion and Sediment Control ("SESC") Plan", "Post-Construction Stormwater Control", and "Illicit Discharge of Stormwater". A copy of the Ordinance is included in Attachment B.	
IV.B.4.b.6	Use the space below to describe actions taken as a result of receipt and consideration of information submitted by the public.
Generally, information submitted by the public is received by the Town Engineer's office or the DPW. The DPW ultimately responds to public complaints.	
IV.B.4.b.8	Use the space below to describe activities and actions taken as a result of referring to the State non-compliant construction site operators. The operator may rely on the Department for assistance in enforcing the provisions of the RIPDES General Permit for Stormwater Discharges Associated with Construction Activity to the MS4 if the operator of the construction site fails to comply with the local and State requirements of the permit and the non-compliance results or has the potential to result in significant adverse environmental impacts.
Site inspections for construction activities are generally completed by the Town Engineer's office and/or the design engineer for various projects. Numerous departments within the Town review proposed construction projects as part of the Land Development Process, including the Town Engineer, Building Official, DPW, Fire Marshal, etc.. Any issue of non-compliance is generally handled on a case-by-case basis.	
Additional Measurable Goals and Activities	

SECTION II. A - Plan and SWPPP/SESC Plan Reviews during Year 20 (2023), Part IV.B.4.b.2: Issuance of permits and/or implementation of policies and procedures for all construction projects resulting in land disturbance of greater than 1 acre. **Part IV.B.4.b.4:** Review 100% of plans and SWPPPs/SESC Plans for construction projects resulting in land disturbance of 1-5 acres, not reviewed by other State programs, must be conducted by adequately trained personnel and incorporate consideration of potential water quality impacts.

# of Construction Applications Received: *~4 new projects/applications* # of Construction Reviews Completed: *~4* # of Permits/Authorizations Issued: *~4*
Summary of Reviews and Findings, include an evaluation of the effectiveness of the program. *Generally, land development projects that require SWPPP/SESC plan reviews are considered minor or major land development projects, as per the Land Development and Subdivision Regulations. Generally, applications for these projects are submitted to the Planning Department, who subsequently distributes submission documents to various Town Departments (Town Engineer, DPW, Fire Marshal, Plan Commission, etc.). The documents, including SESCPs, are reviewed for compliance with local Ordinances, and to ensure all necessary State permits (i.e. RIDEM) are obtained.* Identify person(s) /Department and/or parties responsible for the implementation of this requirement: *Town Planning Department and Town Engineer* Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained": *The Town Engineer's Office is presently filled by the office of Joe Casali Engineering, Inc. Staff includes three (3) professional engineers and three (3) civil designers, all of whom are intimately familiar with the RI Stormwater Design and Installation Standards Manual and the RI Soil Erosion and Sediment Control Handbook.*

SECTION II.B - Erosion and Sediment Control Inspections during Year 20 (2023), Parts IV.G.2.n and IV.B.4.b.7: Inspection of 100% of all construction projects within the regulated area that discharge or have the potential to discharge to the MS4. (The program must include two inspections of all construction sites, first inspection to be conducted during construction for compliance of the Erosion and Sediment controls at the site, the second to be conducted after the final stabilization of the site.) Inspections must be conducted by adequately trained personnel.

# of Active Construction Projects: *~6*	
# of Site Inspections: *~10*	# of Complaints Received: *2*
# of Violations Issued: *0*	# of Unresolved Violations Referred to RIDEM: *0*
Summary of Enforcement Actions, include an evaluation of the effectiveness of the program. *The Town Engineer's office performed approximately ten (10) site inspections to various construction sites during construction to confirm compliance with the Approved Plans and approved SESCPs. Due to the small size of the Town and the fact that there are very few commercial developments, active construction projects are minimal, and inspections can generally be handled by Town staff.* Identify person(s) /Department and/or parties responsible for the implementation of this requirement: *Town Engineer* Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained": *The Town Engineer's Office is presently filled by the office of Joe Casali Engineering, Inc. Staff includes three (3) professional engineers and three (3) civil designers, all of whom are intimately familiar with the RI Stormwater Design and Installation Standards Manual and the RI Soil Erosion and Sediment Control Handbook.*	

MINIMUM CONTROL MEASURE #5:
POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REVELOPMENT
(Part IV.B.5 General Permit)

SECTION I. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as activities implemented to support the review, issuance and tracking of permits, inspections and receipt of complaints, etc. Please indicate if any projects have incorporated the use of Low Impact Development techniques. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

Responsible Party Contact Name & Title: *Mr. Kirk Loiselle, Director of Public Works*

Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

IV.B.5.b.5	Use the space below to describe activities and actions taken to coordinate with existing State programs requiring post-construction stormwater management.
All land development projects require a Long-Term Operation and Maintenance Plan to be submitted to the Plan Commission during the Land Development Review process. In general, these materials are reviewed by the Town Engineer's office prior to formal review by the Town Plan Commission. Upon final approval, Long-Term O&M Plans are to be signed and recorded in the Town Land Evidence Records.	
IV.B.5.b.6	Use the space below to describe actions taken for the referral to RIDEM of new discharges of stormwater associated with industrial activity as defined in §1.4(A)(111) in the *Regulations for the Rhode Island Pollutant Discharge Elimination System* (RIPDES Regulations) (the operator must implement procedures to identify new activities that require permitting, notify RIDEM, and refer facilities with new stormwater discharges associated with industrial activity to ensure that facilities will obtain the proper permits).
No new major industries or associated industrial activity occurred within the Town in 2023. RIDEM will be notified of any new industries within the Town that may require a permit for stormwater discharges, as necessary.	
IV.B.5.b.9	Indicate if the Post-Construction Runoff from New Development and Redevelopment Ordinance was **not** developed, adopted, and submitted to RIDEM, explain reasons why, submit proposed schedule for completion and identify person(s) / Department and/or parties responsible for the completion of this requirement. **Date of Adoption:** *August 2023* If the Ordinance was amended in 2023, please indicate why changes were necessary. Please also indicate if amendments have been made based on the 2010 *RI Stormwater Design and Installation Standards Manual*, and provide references to the amended portions of the local codes/ordinances.
The Town has drafted and adopted a new "Ordinance Amending Chapter 12, Soil Erosion and Sedimentation Control". This new Ordinance includes subsections relative to "Soil Erosion and Sediment Control ("SESC") Plan", "Post-Construction Stormwater Control", and "Illicit Discharge of Stormwater". A copy of the Ordinance is included in Attachment B.	
IV.B.5.b.12	Use the space below to describe activities and actions taken to identify existing stormwater structural BMPs discharging to the MS4 with a goal of ensuring long term O&M of the BMPs.
No specific actions were taken during reporting year 2024 to identify existing stormwater structural BMPs discharging to the MS4.	
Additional Measurable Goals and Activities	

SECTION II.A. - Plan and SWPPP/SWMP Reviews during Year 20 (2023), Part IV.B.5.b.4: Review 100% of post-construction BMPs for the control of stormwater runoff from new development and redevelopment projects that result in discharges to the MS4 which incorporates consideration of potential water quality impacts (the program requires reviewing 100% of plans for development projects greater than 1 acre, not reviewed by other State programs). Plan reviews must be conducted by adequately trained personnel.

# of Post-Construction Applications Received: *0* # of Post-Construction Reviews Completed: *0* # of Permits/Authorizations Issued: *0*
Summary of Reviews and Findings, include an evaluation of the effectiveness of the program. *One major projects achieve a level of completion requiring post-construction review in 2023.* Identify person(s) /Department and/or parties responsible for the implementation of this requirement: *Town Engineer* Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained": *The Town Engineer's Office is presently filled by the office of Joe Casali Engineering, Inc. Staff includes three (3) professional engineers and three (3) civil designers, all of whom are intimately familiar with the RI Stormwater Design and Installation Standards Manual and the RI Soil Erosion and Sediment Control Handbook.*

SECTION II.B. - Post Construction Inspections during Year 20 (2023), Parts IV.G.2.o and IV.B.5.b.10 - Proper Installation of Structural BMPs: Inspection of BMPs, to ensure these are constructed in accordance with the approved plans (the program must include inspection of 100% of all development greater than one acre within the regulated areas that result in discharges to the MS4 regardless of whom performs the review). Inspections must be conducted by adequately trained personnel.

# of Active Construction Projects: *~6*	# of Construction Projects Completed: *0*
# of Site Inspections for proper Installation of BMPs: *~2*	# of Complaints Received: *0*
# of Violations Issued: *0*	# of Unresolved Violations Referred to RIDEM: *0*
Summary of Enforcement Actions: *No post-construction inspections resulted in any enforcement action and/or violations during 2023.* Identify person(s) /Department and/or parties responsible for the implementation of this requirement: *Town Engineer* Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained": *The Town Engineer's Office is presently filled by the office of Joe Casali Engineering, Inc. Staff includes three (3) professional engineers and three (3) civil designers, all of whom are intimately familiar with the RI Stormwater Design and Installation Standards Manual and the RI Soil Erosion and Sediment Control Handbook.*	

SECTION II.C. - Post Construction Inspections during Year 20 (2023), Parts IV.G.2.p and IV.B.5.b.11 - Proper Operation and Maintenance of Structural BMPs: Describe activities and actions taken to track required Operations and Maintenance (O&M) actions for site inspections and enforcement of the O&M of structural BMPs. Tracking of required O&M actions for site inspections and enforcement of the O&M of structural BMPs.

# of Site Inspections for proper O&M of BMPs: *0*	# of Complaints Received: *0*
# of Violations Issued: *0*	# of Unresolved Violations Referred to RIDEM: *0*
Summary of Activities and Enforcement Actions. Evaluate the effectiveness of the Program in minimizing water quality impacts. *None taken during reporting year 2023.* Identify person(s) /Department and/or parties responsible for the implementation of this requirement: *Town Engineer*	

Strategies for requiring the use of non-structural Low Impact Development (LID) site design practices and techniques into stormwater management designs for new and redevelopment projects, check all that apply in your municipality/MS4:

☐ None
☒ Ordinances or by-laws requiring LID standards (e.g. reduced road widths, % conservation land, etc.)
☐ Ordinances or by-laws requiring LID design at conceptual review (i.e., Pre-application and/or Master Plan) stages for municipal review prior to plans being engineered.
☐ Ordinances or by-laws requiring LID standards only in impaired waterbody drainage areas
☒ Local development regulations requiring use of LID to the maximum extent practicable
☒ LID Guidance available in written form
☒ LID Guidance available at pre-application meetings
☐ Other strategies to ensure incorporation of LID to the maximum extent practicable, describe:

_____

_____

Person(s)/Department responsible for reviewing submissions for LID:

Town Engineer and Town Plan Commission

Person(s)/Department/Board responsible for approving submissions for LID at Preliminary and/or Final Review, if applicable:

Town Plan Commission

Are you aware of the Municipal LID Self-Assessment that was introduced by the DEM and RI NEMO in 2019 and finalized and distributed in March 2020?

☒ Yes ☐ No

A final version of the Municipal LID Self-Assessment is available on the DEM's website:
http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/lid-checklist-primer.pdf

Additional guidance is also available:

http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/lid-assessment-fs.pdf

http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/pdfs/lidfactsheet.pdf

http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/lidplan.pdf

Did your community complete the Municipal LID Self-Assessment? ☐ Yes ☒ No

If yes and it was completed in 2023, please provide a copy as an attachment to this Annual Report, if you have not already submitted it.

If no, does your community plan to complete it?

☒ Yes ☐ No

If No, why not? _____

_____

Strategies being implemented to ensure long-term Operation and Maintenance (O&M) of privately-owned structural stormwater BMPs, check all that apply in your municipality/MS4:

- ☐ None
- ☒ Ordinances or by-laws identify BMP inspection responsible party
- ☒ Ordinances or by-laws identify BMP maintenance responsible party
- ☒ Ordinances or by-laws identify BMP inspections and maintenance requirements
- ☒ Ordinances or by-laws provide for easements or covenants for inspections and maintenance
- ☒ Ordinances or by-laws require for every constructed BMP an inspections and maintenance agreement
- ☒ Ordinances or by-laws contain requirements for documenting and detailing inspections
- ☒ Ordinances or by-laws contain requirements for documenting and detailing maintenance
- ☒ Ordinances or by-laws contain authority to enforce for lack of maintenance or BMP failure
- ☐ The MS4 is responsible for inspections of all privately-owned BMPs
- ☐ The MS4 is responsible for maintenance of all privately-owned BMPs
- ☐ Establishment of escrow account for use in case of failure of BMP
- ☐ Other strategies to ensure long-term O&M of privately-owned BMPs, describe:

_____

_____

Does your municipality/MS4 require the use BMPs Operations and Maintenance Agreements? ☒ YES ☐ NO

If YES, please indicate if the Operations and Maintenance Agreements include the following:

a.	Party responsible for the long-term O&M of permanent stormwater management BMPs	☒ YES ☐ NO
b.	A description of the permanent stormwater BMPs that will be operated and maintained	☒ YES ☐ NO
c.	The location of the permanent stormwater BMPs that will be operated and maintained	☒ YES ☐ NO
d.	A timeframe for routine and emergency inspections and maintenance of all permanent stormwater management BMPs	☒ YES ☐ NO
e.	A requirement that all inspections and maintenance activities are documented	☒ YES ☐ NO
f.	Annual submission of inspection/maintenance certification/documentation to the MS4	☒ YES ☐ NO
g.	Stormwater management easement for access for inspections and maintenance or the preservation of stormwater runoff conveyance, infiltration, and detention areas and other stormwater controls and BMPs by persons other than the property owner	☒ YES ☐ NO
h.	Steps available for addressing a failure to maintain the stormwater controls and BMPs	☒ YES ☐ NO

Please elaborate, if appropriate:

_____

_____

Does your municipality/MS4 keep an inventory of privately-owned BMPs? ☐ YES ☒ NO

For privately-owned structural BMPs, does your municipality/MS4 have a system for tracking:

a.	Agreements and arrangements to ensure O&M of BMPs?	☐ YES ☒ NO
b.	Inspections?	☐ YES ☒ NO
c.	Maintenance and schedules?	☐ YES ☒ NO
d.	Complaints?	☐ YES ☒ NO
e.	Non-Compliance?	☐ YES ☒ NO
f.	Enforcement actions?	☐ YES ☒ NO

Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track post-construction BMPs, inspections, and maintenance? ☐ YES ☒ NO

If yes, please elaborate on which tools are used:

_____

_____

NOTE: BMP maintenance tasks can be a great way to involve and educate the community to their purpose and function. BMPs have the potential to create a highly interactive environment for community members and volunteers to get involved.

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MINIMUM CONTROL MEASURE #6:
POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS
(Part IV.B.6 General Permit)

SECTION I. OVERALL EVALUATION:

GENERAL SUMMARY, STATUS, APPROPRIATENESS AND EFFECTIVENESS OF MEASURABLE GOALS:

Include information relevant to the implementation of each measurable goal, such as activities and practices used to address on-going requirements, and personnel responsible. Discuss activities to be carried out during the next reporting cycle. If addressing TMDL requirements, please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

Responsible Party Contact Name & Title: *Mr. Kirk Loiselle, Director of Public Works*

Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

IV.B.6.b.1.i	Use the space below to describe activities and actions taken to identify structural BMPs (these include but are not limited to: retention/detention basins, vegetated treatment, infiltration and pre-treatment controls, etc.) owned or operated by the small MS4 operator (the program must include identification and listing of the specific location and a description of all structural BMPs in the SWMPP and update the information in the Annual Report). Evaluate appropriateness and effectiveness of this requirement. **Do you have an inventory of MS4-owned/operated BMPs?** ☒ YES ☐ NO **Total # of MS4-owned/operated BMPs** (does not include CBs or MHs): *1 (Scituate Police Station)*
Several years back, the Town completed construction of the new Scituate Police Station which includes several BMPs. There are no other known structural BMPs owned by the Town of Scituate.	
IV.B.6.b.1.ii	Use the space below to describe activities and actions taken for inspections, cleaning and repair of detention/retention basins, storm sewers and catch basins with appropriate scheduling given intensity and type of use in the catchment area. Evaluate appropriateness and effectiveness of this requirement. **# of MS4-owned/operated BMPs inspected in 2023**: *1* **# of MS4-owned/operated BMPs maintained/cleaned in 2023**: *1* **# of MS4-owned/operated BMPs repaired in 2023**: *0* Does your municipality/MS4 have a system for tracking: a. Inspection schedules of MS4-owned BMPs? ☐ YES ☒ NO b. Maintenance/cleaning schedules of MS4-owned BMPs? ☐ YES ☒ NO c. Repairs, corrective actions needed? ☐ YES ☒ NO d. Complaints? ☒ YES ☐ NO Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track stormwater BMPs, inspections, and maintenance? ☐ YES ☒ NO

IV.B.6.b.1.iii	Use the space below to describe activities and actions taken to support the requirement of yearly inspection and cleaning of all catch basins (a lesser frequency of inspection based on at least two consecutive years of operational data indicating the system does not require annual cleaning might be acceptable). Evaluate appropriateness and effectiveness of this requirement. **Total # of CBs within regulated area (including SRPW and TMDL areas):** *~1,060* **# of CBs inspected in 2023:** *~400* **% of Total inspected:** *40%* **# of CBs cleaned in 2023:** *~400* **% of Total cleaned:** *40%* If determined, approximate quantity of sand/debris collected by cleaning of catch basins: *Not tracked.* Location used for the disposal of debris: *RIRR Central Landfill* Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track the inspections and cleaning of catch basins? ☐ YES ☒ NO
There are no known tracking records of this data from 2023.	
IV.B.6.b.1.iv	Use the space below to describe activities and actions taken to minimize erosion of road shoulders and roadside ditches by requiring stabilization of those areas. Evaluate appropriateness and effectiveness of this requirement.
In general, new roadways are constructed with curb or with bituminous berm. At locations where severe erosion is observed, efforts are made to stabilize the erosion. The DPW and Town Engineer's office are responsible for this task.	
IV.B.6.b.1.v	Use the space below to describe activities and actions taken to identify and report known discharges causing scouring at outfall pipes or outfalls with excessive sedimentation, for the Department to determine on a case-by-case basis if the scouring or sedimentation is a significant and continuous source of sediments. Evaluate appropriateness and effectiveness of this requirement.
All outfall locations were survey located with a Carlson BRX-7 GPSRover as part of the outfall mapping and observation of the outfalls conditions and flow were documented and completed April/May 2023. Outfalls requiring cleanup or repair were identified to be addressed as part of future improvement projects.	
IV.B.6.b.1.vi	Use the space below to indicate if all streets and roads within the urbanized area were swept annually and if not indicate reason(s). The operator is required to sweep all streets and roads within the regulated area annually unless a lesser frequency can be justified based on at least two consecutive years of data indicating the street or road does not require annual sweeping. Evaluate appropriateness and effectiveness of this requirement. **Total roadway miles within regulated area (including SRPW and TMDL areas):** *~92 miles* **Roadway miles that were swept in 2023:** *~92 miles* **% of Total swept:** *100%* Type of sweeper used: ☒ Rotary brush street sweeper ☐ Vacuum street sweeper If determined, approximate quantity of sand/debris collected by sweeping of streets and roads: *Not tracked.* Location used for the disposal of debris: *Town DPW Yard; RIRR Central Landfill* Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track the annual sweeping of streets and roads? ☐ YES ☒ NO
IV.B.6.b.1.vii	Use the space below to describe activities and actions taken for controls to reduce floatables and other pollutants from the MS4. Evaluate appropriateness and effectiveness of this requirement.
Trash receptacles are available at public parks throughout the Town. The Town held an Earth Day Cleanup event on April 22, 2023 to cleanup litter and debris in and around the Scituate Town Center. Pamphlets, t-shirts, and other waste disposal information was made available at the event. The advertisement from the Valley Breeze is included in Attachment A.	

IV.B.6.b.1.viii	Use the space below to describe the method for disposal of waste removed from MS4s and waste from other municipal operations, including accumulated sediments, floatables and other debris and methods for record-keeping and tracking of this information. Do you have a system for tracking actions to remove and dispose of waste? ☐ YES ☒ NO
Street sweeping / catch basin cleaning removed accumulated sediments from the Town's MS4.	
IV.B.6.b.2	Use the space below to describe any operations under the MS4's legal control, including activities and facilities, that have the potential to introduce pollutants into stormwater runoff, such as pesticide/herbicide/fertilizer application, chemical and waste handling and storage, vehicle fueling, vehicle washing, vehicle maintenance, sand/salt storage, snow disposal, facilities such as public works facilities with maintenance and storage yards, waste transfer stations, municipal wastewater and water treatment facilities, and municipal parking owned and operated by the MS4. Does your MS4 have any salt piles, or piles containing salt, used for deicing? ☒ YES ☐ NO If yes: Are these piles covered to prevent exposure to rain, snow, snowmelt and/or runoff? ☒ YES ☐ NO If yes, check the type of cover used: ☒ Weatherproof permanent structure/shelter ☐ A temporary, secured, durable, waterproof covering (e.g., tarpaulin, polyethylene, polyurethane) Are these piles located on impermeable surfaces? ☒ YES ☐ NO
IV.B.6.b.5	For all facilities with discharges of stormwater associated with industrial activity, use the space below to describe and indicate activities and corrective actions for the evaluation of compliance. This evaluation must include visual quarterly monitoring; routine visual inspections of designated equipment, processes, and material handling areas for evidence of, or the potential for, pollutants entering the drainage system or point source discharges to waters of the State; and inspection of the entire facility at least once a year for evidence of pollution, evaluation of BMPs that have been implemented, and inspection of equipment. A Compliance Evaluation report summarizing the scope of the inspection, personnel making the inspection, major observations related to the implementation of the Stormwater Management Plan (formerly known as a Stormwater Pollution Prevention Plan), and any actions taken to amend the Plan must be kept for record-keeping purposes.
The Town is in the preliminary stages of developing an MS4 Maintenance Plan with schedules and staff assignments.	

IV.B.6.b.6	Use the space below to describe all employee training programs used to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance for the past calendar year, including MS4 staff participation in trainings offered by other parties (e.g. SNEP, EPA) and all in-house training conducted by the municipality/MS4. Evaluate appropriateness and effectiveness of this requirement. How many stormwater management trainings have been provided to *municipal/MS4 employees* during this reporting period? *No trainings were attended during 2023.* What was the date of the training? ___/___/____ Training Topic(s): _____ How many *municipal/MS4 employees* attended this training? _____ What was the date of the training? ___/___/____ Training Topic(s): _____ How many *municipal/MS4 employees* attended this training? _____ [Add additional trainings as necessary.] What percent of *municipal/MS4 employees* in relevant positions and departments received stormwater management training? _____% Have *municipal/MS4 employees* that are responsible for inspecting or cleaning catch basins also been trained to detect and report illicit connections or non-stormwater discharges? ☒ YES ☐ NO
IV.B.6.b.7	Use the space below to describe actions taken to ensure that new flow management projects undertaken by the operator are assessed for potential water quality impacts and existing projects are assessed for incorporation of additional water quality protection devices or practices. Evaluate appropriateness and effectiveness of this requirement.
The Town is in the preliminary stages of developing an MS4 Maintenance Plan with schedules and staff assignments.	
Additional Measurable Goals and Activities	

SECTION II.A - Structural BMPs (Part IV.B.6.b.1.i) These include but are not limited to: retention/detention basins, vegetated treatment, infiltration, and pre-treatment controls, etc.

BMP ID:	Location:	Name of BMP Owner/Operator:	Description of BMP:	Frequency of Inspection:
Not Applicable				

SECTION II.B - Discharges Causing Scouring or Excessive Sedimentation (Part IV.B.6.b.1.v)

Outfall ID:	Location:	Description of Problem:	Description of Remediation Taken, include dates:	Receiving Water Body Name/Description:
11	Northing: 237424.876 Easting: 312029.751	Collapsed structure	TBD	Pawtuxet River
12	Northing: 237180.909 Easting: 313667.260	Filled with concrete	TBD	Pawtuxet River
14	Northing: 235996.9231 Easting: 314215.7272	Partially collapsed	TBD	Pawtuxet River
21	Northing: 238666.7836 Easting: 314199.6895	Partially collapsed	TBD	Cranberry Brook
22	Northing: 238682.3060 Easting: 314111.7814	Excessive silt/sediment	TBD	Cranberry Brook
23	Northing: 251913.8110 Easting: 309923.2704	Excessive silt/sediment	TBD	Scituate Reservoir
29	Northing: 276857.2973 Easting: 304732.7501	Excessive silt/sediment	TBD	Moswansicut Pond
30	Northing: 273506.6310 Easting: 303593.1309	Excessive silt/sediment	TBD	Scituate Reservoir

SECTION II.C - Note any planned municipal/MS4-owned construction projects/opportunities to incorporate water quality BMPs, low impact development, or activities to promote infiltration and recharge (Part IV.G.2.j).

No activities during reporting year 2023.

SECTION II.D - Please include a summary of results of any other information that has been collected and analyzed. This includes any type of data (Part IV.G.2.e).

TOTAL MAXIMUM DAILY LOAD (TMDL) or other Water Quality Determination REQUIREMENTS

SECTION I. If you have been notified that discharges from your MS4 require non-structural or structural stormwater controls based on an approved TMDL or other water quality determination, please provide an assessment of the progress towards meeting the requirements for the control of stormwater identified in the approved TMDL (Part IV.G.2.d). Please indicate rationale for the activities chosen to address the pollutant of concern.

(Note: Identify parties responsible for achieving the measurable goals and reference any reliance on another entity for achieving measurable goals. Mark with an asterisk (*) if this person/entity is different from last year.)

Responsible Party Contact Name & Title: *Mr. Kirk Loiselle, Director of Public Works*

Phone: *401-647-3366* **Email:** *kloiselle@scituateri.org*

LIST OF IMPAIRED WATERS:			
Impaired Water Body: Rush Brook & Tributaries RI0006015R-22	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☒ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
Impaired Water Body: Wilbur Hollow Brook & Tributaries RI00006015R-29	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
Impaired Water Body: Huntinghouse Brook RI0006015R-11	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☒ YES ☐ NO ☒ YES ☐ NO ☐ YES ☒ NO
Impaired Water Body: Regulating Reservoir	Pollutants Causing Impairments: Non-native aquatic plants	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
Impaired Water Body: Boyd Brook RI0006013R-01	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☒ YES ☐ NO ☒ YES ☐ NO ☐ YES ☒ NO
Impaired Water Body: Moswansicut Stream RI0006015R-16	Pollutants Causing Impairments: E. coli	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☒ YES ☐ NO ☒ YES ☐ NO ☐ YES ☒ NO
Impaired Water Body: Unnamed Brook RI0006015R-29	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
Impaired Water Body: North Branch Pawtuxet River RI0006016R-06B	Pollutants Causing Impairments: Lead, mercury in fish tissue	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO

TOTAL MAXIMUM DAILY LOAD (TMDL) OR OTHER WATER QUALITY DETERMINATION REQUIREMENTS cont'd

Impaired Water Body: Rush Brook & Tributaries RI0006015R-22	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☒ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
Impaired Water Body: Wilbur Hollow Brook & Tributaries RI00006015R-29	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO
Impaired Water Body: Huntinghouse Brook RI0006015R-11	Pollutants Causing Impairments: Enterococcus	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☒ YES ☐ NO ☒ YES ☐ NO ☐ YES ☒ NO
Impaired Water Body: Regulating Reservoir	Pollutants Causing Impairments: Non-native aquatic plants	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	☐ YES ☒ NO ☐ YES ☒ NO ☐ YES ☒ NO

What kind of public education and outreach strategy does the MS4 implement to target each pollutant of concern? (e.g., signage on installed stormwater controls, resources on website, pamphlets about litter, pet waste, grass clippings, fertilizer use, etc.)

Pollutant of Concern:	Strategy:	Target Audience:
No specific measures taken in 2023		

Has the MS4 installed stormwater BMPs or required the installation of stormwater BMPs on private property to address impairments? ☐ YES ☒ NO

If yes, indicate the name of the impaired water body associated with the stormwater control, type of stormwater control, date installed, ownership, and who is responsible for maintenance:

Impaired water body	Type of Stormwater Control:	Date Installed:	☐ Municipally/MS4-Owned ☐ Privately-Owned	Who maintains it?
Not Applicable				

Additional enhanced minimum measures used to address water quality issues (e.g., increased street sweeping or catch basin cleaning in areas with high pollutant loading, installation of floatable traps/screens, etc.):
The Providence Water Supply Board (PWSB) maintains numerous advanced water quality monitoring stations within the Scituate Reservoir Watershed Area; if certain water quality thresholds are exceeded, the PWSB will investigate the cause. Coordination between the Town and the PWSB is ongoing throughout the year.

SPECIAL RESOURCE PROTECTION WATERS (SRPWs)

SECTION I. In accordance with Title 250 RICR-150-10-1 ("RIPDES Regulations") §1.32(A)(5)(a)(7), on or after March 10, 2008, any discharge from a small municipal separate storm sewer system to any Special Resource Protection Waters (SRPWs) or impaired water bodies within its jurisdiction must obtain permits if a waiver has not been granted in accordance with RIPDES Regulations §1.32(G)(5)(c). A list of SRPWs can be found in Title 250-RICR-150-05-1 ("Water Quality Regulations") §1.28 at this link:
https://rules.sos.ri.gov/regulations/part/250-150-05-1
The State of Rhode Island 2022 Integrated Water Quality Monitoring and Assessment Report (which includes the Section 305(b) State of the State's Waters Report and the Section 303(d) List of Impaired Waters) can be found here: https://dem.ri.gov/sites/g/files/xkgbur861/files/2022-09/RIDEM%202022%20Integrated%20Report%2003-29-2022.pdf

If you have discharges from your MS4 (regardless of its location) to any of the listed SRPWs or impaired waters (including impaired waters when a TMDL has not been approved), please provide an assessment of the progress towards expanding the MS4 Phase II Stormwater Program to include the discharges to the aforementioned waters and adapting the Six Minimum Control Measures to include the control of stormwater in these areas. Please indicate a rationale for the activities chosen to protect these waters. Please note that all of the measurable goals and BMPs required by the 2003 MS4 General Permit may not be applicable to these discharges.

Barden Reservoir (RI0006015L006) for drinking water supply.

Huntinghouse Brook (RI0006015R-11) for ecological habitat and critical habitat (rare and endangered species).

Moswansicut Pond (RI0006015l-04) for drinking water supply.

Regulating Reservoir (RI0006015L-01) for drinking water supply.

Scituate Reservoir (RI0006015L-07) for drinking water supply.

Westconnaug Reservoir (RI0006015L-03) for drinking water supply.

No specific measures taken in 2023.

Attachment A

Earth Day Cleanup – Valley Breeze Advertisement

https://www.valleybreeze.com/news/smithfield_and_west/earth-day-cleanup-in-scituate-april-22/article_01fa4eec-d257-11ed-959d-638d316d30c3.html

Earth Day Cleanup in Scituate April 22

Apr 6, 2023

SCITUATE – A Scituate Earth Day Cleanup will be held on Saturday, April 22, from 9 a.m. to noon, with the staging area at the North Scituate Community House, 546 West Greenville Road.

Participants are asked to arrive between 9 and 10 a.m. to sign in and pick up T-shirts and disposable gloves. Volunteers are asked to bring their own bags for the cleanup. A limited amount of bags will be available. Bags should be returned to the staging area, or email recycling@scituateri.org to request roadside pickup.

There will also be a raffle for a home compost bin, and information on composting.

Clothes, shoes and linens will be collected for the North Scituate Elementary School clothing and recycling drive at the event.

Email recycling@scituateri.org for more information.

Attachment B

Town of Scituate Ordinance 23-02:
Soil Erosion and Sediment Control ("SESC") Plan
Post-Construction Stormwater
Illicit Discharge Detection and Elimination

ORDINANCE NO. 23-02

TOWN OF SCITUATE

AN ORDINANCE AMENDING CHAPTER 12, SOIL EROSION AND SEDIMENTATION CONTROL

SECTION 1. The Town Council of the Town of Scituate hereby ordains that Chapter 12 ("Soil Erosion and Sedimentation Control"), of the Code of Ordinances, Town of Scituate is hereby amended as follows:

Note: Words set as ~~strikeover~~ are to be **deleted** from the ordinance; words set in underline are to be **added** to the ordinance.

~~**ARTICLE I. - IN GENERAL**~~

~~**Sec. 12-1. - Definitions.**~~

~~The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:~~

~~*Applicant* means any person proposing a development which would involve disturbance to the natural terrain.~~

~~*Cut* means an excavation, the difference between a point on the original ground and a designated point of lower elevation on the final grade. Also, the material removed in excavation.~~

~~*Development project* means any construction, reconstruction, demolition, or removal of structures, roadways, parking, or other paved areas; utilities, or other similar facilities, including any action requiring permit by the town.~~

~~*Erosion* means the removal of mineral and/or organic matter by the action of wind, water, and/or gravity.~~

~~*Excavate* means any act by which earth, sand, gravel, rock, or any other similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated, or bulldozed, and shall include the conditions resulting therefrom.~~

~~*Fill* means any act by which earth, sand, or other material is placed or moved to a new location aboveground. The fill is also the difference in elevation between a point or existing undisturbed ground and a designated point of higher elevation of the final grade.~~

Land disturbing activity means any physical land development activity which included such actions as clearance of vegetation; moving or filling of land; removal or excavation of *soil* or mineral resources; or similar activities.

Runoff means the surface water discharge or rate of discharge of a given watershed after a fall of rain or snow and including seepage flows that do not enter the *soil* but run off the surface of the land. Also, that portion of water that is not absorbed by the *soil*, but runs off the land surface.

Sediment means solid material, both mineral and/or organic, that is in suspension, is being transported, or has been moved from its site of origin by wind, water and/or gravity as a product of erosion.

Soil erosion and sediment control plans means the approved document required before any person may cause a disturbance to the natural terrain within the town as herein regulated. Also, herein referred to as erosion and sediment control plan, approved plan.

Sec. 12-2. - Purpose.

(a) The town council hereby finds that excessive quantities of *soil* are eroding from certain areas that are undergoing development for nonagricultural uses such as housing developments, industrial areas, recreational facilities and roads. This erosion makes necessary costly repairs to gullies, washed out fills, roads, and embankments. The resulting sediment clogs the storm sewers, road ditches and muddies streams, leaves deposits of silt in ponds and reservoirs and is considered a major water pollutant.

(b) The purpose of this chapter is to prevent *soil* erosion and sedimentation from occurring as a result of nonagricultural development within the town by requiring proper provisions for water disposal, and the protection of *soil* surfaces during and after construction, in order to promote the safety, public health and general welfare of the town.

Sec. 12-3. - Application.

This chapter shall be applicable in any situation involving any disturbance to the natural terrain, topsoil or vegetative ground cover upon any property within the town except as so specified in section 12-31, including but not limited to the following specific situations:

(1) For any development project subject to the obtaining of a building permit pursuant to the building code.

(2) For any development project subject to the approval of a subdivision plan pursuant to the subdivision regulations; however, the preliminary and final plats approved by the town planning commission shall constitute the plan.

(3) All plans for projects undertaken by the town through private contractors shall include in the specifications and in the contract documents the requirements of this chapter.

(4) All projects undertaken directly by the department of public works and by its several divisions shall be undertaken in accordance with the performance principles provided for in section 12-59 and such standards and definitions as may be adopted to implement such performance principles.

Sec. 12-4. - Penalty for violation.

In addition to any other provision of this chapter, whenever there is a failure to comply with the provisions of this chapter, the town shall have the right to notify the applicant/owner that it has five (5) days from the receipt of notice to temporarily correct the violations and thirty (30) days from receipt of notice to permanently correct the violations. Should the applicant/owner fail to take the temporary corrective measures within the five-day period and the permanent corrective measures within the thirty-day period, the town shall then have the right to take whatever actions it deems necessary to correct the violations and to assert a lien on the subject property in an amount equal to the costs of remedial actions. The imposition of any penalty shall not exempt the offender from compliance with the provisions of this chapter, including revocation of the performance bond or assessment of a lien on the property by the town.

Sec. 12-5. - Liability.

Neither approval of an erosion and sediment control plan nor compliance with any condition of this chapter shall relieve the owner/applicant from any responsibility for damage to persons or property, nor impose any liability upon the town for damages to persons or property.

Sec. 12-6. - Approval; expiration, renewal.

(a) Every approval granted pursuant to this chapter shall expire at the end of the time period set forth in the conditions. The developer shall fully perform and complete all of the work required within the specified time period.

(b) If the developer is unable to complete the work within the designated time period, he shall, at least thirty (30) days prior to the expiration date, submit a written request for an extension of time to the building official, setting forth the reasons underlying the requested time extension. If the extension is warranted, the building official may grant an extension of time up to a maximum of one (1) year from the date of the original deadline. Subsequent extensions under the same conditions may be granted at the discretion of the building official.

~~Sec. 12-7. - Maintenance of measures.~~

~~Maintenance of all erosion-sediment control devices under this chapter shall be the responsibility of the owner. Such erosion-sediment control devices shall be maintained in good condition and working order on a continuing basis. Watercourses originating and located completely on private property shall be the responsibility of the owner to their point of open discharge at the property line or at a communal watercourse within the property.~~

~~Sec. 12-8. - Periodic inspections.~~

~~The provisions of this chapter shall be administered and enforced by the building official or his designated representative. All work shall be subject to periodic inspections by the building officials, or his authorized agent. All work shall be performed in accordance with an inspection and construction control schedule approved by the building official or his designated representative, who shall maintain a permanent file on all of its inspections. Upon completion of the work, the developer or owner shall notify the building official that all grading, drainage, erosion and sediment control measures and devices, and vegetation and ground cover planting has been completed in conformance with the approval, all attached plans, specifications, conditions, and other applicable provisions of this chapter.~~

~~Sec. 12-9. - Final inspections.~~

~~(a) Upon notification of the completion of work under this chapter by the owner, the building official or his authorized agent shall make a final inspection of the site in question and shall prepare a final summary inspection report of his findings which shall be retained in the department of inspections and in the department of public works permanent inspections file.~~

~~(b) After the final site inspection has been completed and approved, the applicant/owner may request a release of his performance bond by the building official. In the instance where the performance bond has been posted with the recording of a final subdivision, the bond shall be released after the building official has been notified by the plan commission of successful completion of all plat improvements by the applicant/owner.~~

Sec. 12-10. - Noncompliance.

If, at any stage, the work in progress and/or completed under the terms of an approved erosion and sediment control plan does not conform to such plan, a written notice from the building official to comply shall be transmitted to the owner. Such notice shall set forth the nature of corrections required and the time limit within which corrections shall be completed. Failure to comply with the required corrections within the specified time limit shall be considered in violation of this chapter, in which case the performance bond or cash or negotiable securities deposit shall be subject to notice of default, in accordance with section 12-61.

Sec. 12-11. - Revocation or suspension of approval.

The approval of an erosion and sediment control plan under this chapter may be revoked or suspended and work initiated under the plan halted for an indefinite time period by the building official or his authorized agent after written notification is transmitted to the developer for one (1) or more of the following reasons:

(1) Violation of any condition of the approved plan, conditions or specifications pertaining thereto;

(2) Violation of any provision of this chapter or any other applicable law, ordinance, rule or regulation related to the work or site of work; and

(3) The existence of any condition or the performance of any act constituting or creating a nuisance, hazard, or endangerment to human life or the property of others, or contrary to the spirit or intent of this chapter.

Secs. 12-12—12-30. - Reserved.

ARTICLE II. - PERMIT

Sec. 12-31. - Required.

It shall be unlawful for any person to disturb any existing vegetation, grades, and contours of land without first applying for and receiving a permit from the building official.

~~Sec. 12-32. - Exceptions.~~

~~No permit shall be required under this article for the following:~~

~~(1) The construction, alteration or use of a single-family residential structure or appurtenance or a two-family residential structure or structures accessory thereto, which is or are to be constructed, altered or used individually and not as part of a development, provided such construction, including land distribution activities, does not occur within one hundred (100) feet of any watercourse and has no slopes greater than ten (10) feet horizontal or ten (10) percent;~~

~~(2) Development projects where less than one-half acre is to be disturbed during one (1) planting season, and which disturbance of *soil* is not within one hundred (100) feet of any watercourse, has no slope greater than ten (10) percent, and where in the opinion of the building official, no *soil* erosion will occur; and~~

~~(3) Accepted agricultural management practices such as seasonal tilling and harvest activities associated with property utilized for private or commercial agricultural or silvacultural purposes;~~

~~(4) An excavation which exhibits all of the following characteristics:~~

~~a. Is less than four (4) feet in vertical depth at its deepest point as measured from the average elevation of the natural ground surface.~~

~~b. Does not result in a total displacement of more than one hundred (100) cubic yards of material on any lot, land, parcel or subdivision.~~

~~c. Has no slopes steeper than ten (10) feet vertical in one hundred (100) feet horizontal or approximately ten (10) percent.~~

~~d. Has all disturbed surface areas promptly and effectively protected to prevent *soil* erosion and sedimentation from occurring including seeding or sodding, and provided that all disturbed surface areas which will be exposed for a period of time in excess of thirty (30) days shall be covered with a suitable temporary protective ground cover until permanent ground cover is in place.~~

~~(5) Grading, as a maintenance measure, or for landscaping purposes on existing developed land parcels or lots, provided that all of the following conditions are met:~~

~~a. The aggregate of areas affected or stripped at any one (1) time does not exceed ten thousand (10,000) square feet.~~

b. The change of elevation does not exceed two (2) feet at any point.

c. All bare surface area is promptly seeded, sodded, or otherwise effectively protected from erosive actions.

d. The grading does not involve a quantity of material in excess of five hundred (500) cubic yards.

(6) Grading, filling, removal or excavation activities and operations undertaken by the town under the direction and supervision of the director of public works for work on streets, roads or rights-of-ways dedicated to public use; provided, however, that adequate and acceptable erosion and sediment controls are incorporated in engineering plans and specifications and employed. Appropriate controls shall apply during construction as well as after the completion of such activities.

Sec. 12-33. - Submission of plan—Generally.

To obtain approval for a permit under the provisions of this article, an applicant shall first file an erosion and sediment control plan signed by the owner of the property, or authorized agent, on which the work subject to approval is to be performed. The plan or drawings, as described in section 12-56, shall include proposed erosion and sediment control measures to be employed by the applicant or his agent.

Sec. 12-34. - Same—Freshwater wetlands permit.

Where any portion of a proposed development requires approval under the Rhode Island Freshwater Wetlands Act (General Laws section 2-1-15 et seq.), as amended, and where such approval contains provisions for *soil* erosion and sediment controls, that approved plan shall be a component of the overall *soil* erosion and sediment control plan required hereunder for the development.

Sec. 12-35. - Building permit fees.

Where a building permit is required under the building code, the site plans shall include all the requirements of this chapter and the building permit fee shall be based on the entire cost of the building plus improvements required by this chapter. Application of such fees shall apply to all land-disturbing activities; for example, subdivisions, except as provided for under section 12-32.

~~Sec. 12-36. - Plan review.~~

~~(a) Within five (5) working days of the receipt of a completed plan, the building official shall send a copy of the plan to the public works department and the plan commission for the purpose of review and comment. The building official may also within the above time frame submit copies of the plan to other local departments or agencies, including the conservation district that services their county, in order to better achieve the purposes of this chapter.~~

~~(b) The time allowed for plan review shall be commensurate with the proposed development project, and shall be done simultaneously with other reviews.~~

~~Sec. 12-37. - Plan approval.~~

~~(a) The building official shall take action in writing either approving or disapproving the plan with reasons stated within ten (10) days after he has received the written opinion of the public works director and the plan commission. Failure of the public works director or the plan commission to respond within twenty-one (21) days of the receipt of the plan shall be deemed as no objection to the plan as submitted.~~

~~(b) In approving a plan, the building official may attach such conditions deemed reasonably necessary by the director of public works and the plan commission to further the purposes of this chapter. Such conditions pertaining to erosion and sediment control measures and/or devices, may include, but are not limited to, the erection of walls, drains, dams and structures, planting vegetation, trees, shrubs, furnishings, necessary easements and specifying a method of performing various kinds of work, and the sequence or timing thereof. The applicant/owner shall notify the building inspector in advance of this intent to begin clearing and construction work described in the erosion and sediment control plan. The applicant shall have the erosion and sediment control plan on the site during grading and construction.~~

~~Sec. 12-38. - Appeals.~~

~~(a) If the ruling made by the building official is unsatisfactory to the applicant/owner, the applicant/owner may file a written appeal. The appeal of the plan for a building permit shall be to the building appeals board. The appeal of a plan for a subdivision shall be as provided for in section 45-23-14 of the General Laws.~~

~~(b) Appeal procedures shall follow current requirements for appeal to either of the two (2) boards above.~~

(c) However, under any appeal proceedings, the building official shall notify the conservation commission of the appeal and the time, date, and place of the hearing. The conservation commission shall submit written comments on the appeal, and such comments, together with the written decision of the building official, shall be read into the official record of the hearing.

(d) During the period in which the request for appeal is filed, and until such time as a final decision is rendered on the appeal, the decision of the building official shall remain in effect.

Sec. 12-39. - Expert opinion.

The building inspector, the building appeals board, or the plan commission of review may seek technical assistance on any *soil* erosion and sediment control plan. Such expert opinion must be made available in the office of the building inspector as a public record prior to the appeals hearing.

Sees. 12-40—12-55. - Reserved.

ARTICLE III. - EROSION AND SEDIMENT CONTROL PLAN

Sec. 12-56. - Preparation.

(a) The erosion and sediment control plan shall be prepared by a registered engineer or land surveyor on standard eight and one-half-inch by eleven-inch, eleven-inch by seventeen-inch or twenty-four-inch by thirty-six (36) inch sheets at a suggested scale of one (1) inch equals forty (40) feet. A key sheet shall be included if a plan consists of more than two (2) sheets.

(b) The erosion and sediment control plan shall include sufficient information about the proposed activities and land parcels to form a clear basis for discussion and review and to ensure compliance with all applicable requirements of this chapter.

Sec. 12-57. - Number of copies.

A minimum of three (3) copies of the erosion and sediment control plan, plus any additional copies that may be required by the building inspector, shall be submitted.

Sec. 12-58. - Contents.

The following information may be drafted on the erosion and sediment control plan or may be included as attachments and shall consist of the following:

(1) Locus plan.

~~(2) The name and address of the owner of the site, and, if different, the applicant, the designer, and the developer.~~

~~(3) The location, extent, and type of all proposed work to be performed, including all existing and proposed buildings, structures, utilities, sewers, water mains, and storm drains on the site.~~

~~(4) Topographic mapping with elevations keyed to the municipal base showing existing contours at intervals of not more than two (2) feet and contours at two-foot intervals of the finished grade of all disturbed land areas at the conclusion of the construction and/or land disturbance activities.~~

~~(5) A description of the general topographic and *soil* conditions at the project site, including all significant limitations such as rock, outcrops, existing alterations to natural drainage, and any other site characteristics pertinent to the work to be performed.~~

~~(6) The location and size of all parking and loading areas and driveways, both public and private.~~

~~(7) The location of all existing and proposed buildings or structures, utilities including drainage facilities, and all significant natural features within one hundred (100) feet of the proposed work to be performed.~~

~~(8) The name, location, right-of-way width, and pavement width of all streets, roads and highways within one hundred (100) feet of the site.~~

~~(9) The location and names, if applicable, of any streams, wetlands, water bodies, drainage swales, watercourses, and areas subject to periodic flooding, both on and within one hundred (100) feet of the site on which the work is to be performed. Included shall be a delineation of any areas designated as flood hazards by the federal emergency management agency or other state or federal agency.~~

~~(10) The names and addresses of all owners of abutting parcels and the location of all adjoining lot boundaries according to the latest assessor's records.~~

~~(11) The approximate total quantity of earthwork involved in the proposed work, with appropriate breakdown as to cut and fill.~~

~~(12) The location and extent of the removal of existing topsoil, trees, and other vegetation; quantities and location of any material to be removed from the site.~~

~~(13) The estimated time of exposure for all disturbed land areas on the site prior to the completion of effective temporary and/or permanent erosion and sediment control measures and facilities. This shall include planting and seeding dates and application rates, and the phasing plan indicating the anticipated starting and completion dates of all phases of proposed site work.~~

~~(14) Details of all proposed drainage provisions to be employed on the site including the location and type of all proposed erosion and sediment control measures and stormwater runoff controls of both a permanent and temporary nature and specifications for the maintenance of each.~~

~~(15) The type, location, and extent of all proposed temporary and permanent vegetation and mulching that will be used to protect exposed areas of the project site.~~

(16) Prompt submittal of such other information or construction plans and details as deemed necessary by the building official or his designated agent for a thorough review of the plan prior to action being taken as prescribed in this chapter. Withholding or delay of such information may be reason for the building official to judge the application as incomplete and grounds for disapproval.

Sec. 12-59. - Performance principals.

(a) The contents of the erosion and sediment control plan shall clearly demonstrate how the principles, outlined below, have been met in the design and are to be accomplished by the proposed development project.

(1) The site selected shall show due regard for natural drainage characteristics and topography.

(2) Areas with slopes exceeding ten (10) percent shall be avoided.

(3) The grade of slopes created shall be minimized.

(4) When downstream capacities prove to be inadequate, any increase in storm runoff shall be controlled on-site to minimize downstream impact. This increased storm runoff shall be retained and recharged as close as feasible to its place of origin by means of detention ponds or basins, seepage areas, subsurface drains, porous paving, or similar technique.

(5) Original boundaries, alignment and slope of watercourses within the project locus shall be preserved to the greatest extent feasible.

(6) In general, drainage shall be directed away from structures intended for human occupancy, municipal or utility use, or similar structures.

(7) All drainage provisions shall be of such a design and capacity so as to adequately handle stormwater runoff, including runoff from tributary upstream areas which may be outside the locus of the project.

(8) Drainage facilities shall be installed as early as feasible during construction, prior to site clearance, if possible.

(9) Fill located adjacent to watercourses shall be suitably protected from erosion by means of rip-rap, gabions, retaining walls, vegetative stabilization, or similar measures.

~~(10) Temporary vegetation and/or mulching shall be used to protect bare areas and stockpiles from erosion during construction; the smallest areas feasible shall be exposed at any one (1) time; disturbed areas shall be protected during the nongrowing months, November through March.~~

~~(11) Permanent vegetation shall be placed immediately following fine grading.~~

~~(12) Trees and other existing vegetation shall be retained whenever feasible; the area beyond the dripline shall be fenced or roped off to protect trees from construction equipment.~~

~~(13) Areas damaged during construction shall be resodded, reseeded, or otherwise restored. Monitoring and maintenance schedules, where required, shall be predetermined.~~

~~(b) In order to comply with the principles set forth above, the building official shall use as a reference in determining the suitability and adequacy of erosion-sediment plans the publication entitled, "Rhode Island Erosion and Sediment Control Handbook," U.S. Department of Agriculture. *Soil* Conservation Service and Rhode Island State Conservation Committee, 1980, or its most recent addition.~~

~~Sec. 12-60. - Performance bond—Required.~~

~~(a) Before approving an erosion sediment control plan, the building official may require the applicant/owner to file a surety company performance bond or deposit of money or negotiable securities. When any land-disturbing activity is to take place within one hundred (100) feet of any watercourse or within an identified flood hazard district, or on slopes in excess of ten (10) percent, the filing of a performance bond shall be required. The amount of such bond, as determined by the public works department, shall be sufficient to cover the cost of implementing all erosion and sediment control measures as shown on the plan.~~

~~(b) The bond or negotiable security filed by the applicant shall be subject to approval of the form, content, amount and manner of execution by the public works director and the town solicitor.~~

~~(c) A performance bond for an erosion sediment control plan for a subdivision may be included in the performance bond of the subdivision. The posting of such bond as part of the subdivision performance bond does not, however, relieve the owner of any requirement of this chapter.~~

~~**Sec. 12-61. - Same—Notice of default.**~~

~~(a) *Performance secured by bond.* Whenever the building official shall find that a default has occurred in the performance of any term or condition of the bond or in the implementation of measures secured by the bond, written notice thereof shall be made to the applicant and to the surety of the bond by the town solicitor. Such notice shall state the nature of default, work to be done, the estimated cost thereof, and the period of time deemed by the building official to be reasonably necessary for the completion of such work.~~

~~(b) *Failure to comply.* Failure of the applicant to acknowledge and comply with the provisions and deadlines outlined in such notice of default shall mean the institution, by the town solicitor, without further notice of proceedings whatsoever, of appropriate measures to utilize the performance bond to cause the required work to be completed by the town, by contract or by other appropriate means as determined by the town solicitor.~~

~~(c) *Performance secured by cash or negotiable securities deposit.* If a cash or negotiable securities deposit has been posted by the applicant, notice and procedure shall be the same as provided for in the preceding (a) and (b) above.~~

~~**Sec. 12-62. - Same—Release.**~~

~~The performance bonding requirement shall remain in full force and effect until satisfactory completion of the work.~~

ARTICLE I – SOIL EROSION AND SEDIMENT CONTROL ("SESC") PLAN

Section 12.1.1 Purpose.

The Scituate Town Council hereby finds that excessive quantities of soil are eroding from certain areas that are undergoing development for nonagricultural uses such as housing development, industrial areas, recreational facilities, and roads. This erosion makes necessary costly repairs to gullies, washed out fills, roads, and embankments. The resulting sediment clogs the storm sewers, road ditches, and muddies streams, leave deposits of silt in ponds and reservoirs and is considered a major water pollutant.

The purpose of this ordinance is to control the discharge of construction waste and prevent soil erosion and sedimentation from occurring as a result of nonagricultural development within the Town of Scituate by requiring the use of appropriate best management practices (BMP's) and proper provisions for water disposal, construction waste management, and the protection of soil surfaces during and after construction to reduce or eliminate the pollutants in stormwater discharges, in order to promote the safety, public health and general welfare of the Town.

Section 12.1.2. Findings.

1. The Town Council finds that excessive quantities of soil are eroding from certain areas of the Town which are undergoing development for certain nonagricultural uses such as housing developments, industrial areas, recreational facilities, commercial facilities, and roads.

2. Soil erosion occurring in areas undergoing nonagricultural development makes costly repairs necessary to gullies, washed-out fills, roads, and embankments. The resulting sediment clogs storm sewers and road ditches, and deposits silt into ponds, rivers, streams, and brooks.

3. Silt resulting from erosion threatens the water supply, as well as the recreational, aesthetic, and wildlife habitat values associated with these waters.

4. Construction debris, litter and spills also clog the storm water management system and contaminate surface and ground water. Other construction wastes including construction debris and chemicals, concrete truck washout, oil and grease, litter and sanitary waste may cause adverse impacts to water quality when discharged from a construction site.

Section 12.1.3. Authority.

The Town Council shall grant the Building Official and/or the Zoning Official and/or the Town Engineer and/or his or her designee the authority necessary to administer this chapter under the provisions of G.L. 1956, § 45-46-1 *et seq.*, Soil Erosion and Sediment Control.

Section 12.1.4. Applicability.

This ordinance is applicable to any situation involving any disturbance to the terrain, topsoil or vegetative ground cover upon any property within the Town of Scituate after determination of applicability by the Building Official or his or her designee based upon criteria outlined below. This section shall not apply to existing quarrying operations actively engaged in excavating rock. Compliance with the requirements as described herein shall not be construed to relieve the owner/applicant of any obligations to obtain necessary state or federal permits. Projects requiring review and approval from the Planning and/or Zoning Board shall receive Final approvals from the appropriate board prior to commencement of any land disturbing activities as described above.

Section 12.1.5. Determination of applicability.

It is unlawful for any person to disturb any existing vegetation, grades, and contours of land in a manner which may increase the potential for soil erosion and affect the quality and quantity of stormwater discharges associated with both the construction and postconstruction activity, without first applying for a determination of applicability from the Building Official or his or her designee, except that the following activities shall be

determined to be subject to the requirements of this ordinance: all activities disturbing a total area equal to or greater than one acre, including disturbances less than one acre if part of a larger common plan; and any activity that requires permit approval by the Rhode Island Department of Environmental Management (RIDEM). Upon determination of applicability, the owner/applicant shall submit a Soil Erosion and Sediment Control SESC Plan for approval by the Building Official or his or her designee. The application for determination of applicability shall describe the location, nature, character, and time schedule of the proposed land disturbing activity in sufficient detail to allow the Building Official or his or her designee to determine the potential for soil erosion and sedimentation resulting from the proposed project.

In determining the applicability of this Section to a particular land disturbing activity, the Building Official or his or her designee shall consider site topography, drainage patterns, soils, proximity to watercourses, and other such information as deemed appropriate by the Building Official or his or her designee.

Where less than a total of one acre is disturbed, a particular land disturbing activity shall not be subject to the requirements of this ordinance if the Building Official or his or her designee finds that erosion resulting from the land disturbing activity is insignificant and represents no threat to adjacent properties or to the quality of any watercourse, as defined herein. The most current "Rhode Island Soil Erosion and Sediment Control Handbook" prepared by the U.S. Department of Agriculture Natural Resources Conservation Service, R.I. Department of Environmental Management, and R.I. State Conservation Committee shall be consulted in making this determination.

In making this determination, the building official will also take into consideration the sensitivity of the waterbody to which the site drains. A waterbody and its watershed will be considered sensitive if a Total Maximum Daily Load or Special Area Management Plan is written or under development for it, or it is included on RIDEM's 303(d) list, or is included on RIDEM's list of Special Resource Protection Waters (Appendix D of the Water Quality Regulations), or has been noted by the municipality to be of special concern.

The Building Official or his or her designee shall accept satisfactory evidence in writing from persons who have been conducting excavation and sand and gravel operations for more than one (1) year prior to the date of the determination of applicability. The evidence shall show that the excavation and the sand and gravel operations have been actively operating for five (5) years and that the procedures followed at the existing operations accomplish the objectives of the statute as such procedures prevent soil erosion and sedimentation from occurring and procedures regarding water disposal and soil surfaces promote the safety, public health and general welfare of the Town.

Exemptions. No determination of applicability is required for the following:

(1) A valid RIDEM FWW or RIPDES Permit for the project.

(2) Construction, alteration, or use of any additions to existing single-family or duplex homes or related structures, provided the grounds coverage of such addition is less than 1,000 square feet; such construction, alteration, and use does not occur within 100 feet of any watercourse or coastal feature; and the slopes at the site of land disturbance do not exceed 10%.

(3) Use of a home garden in association with on-site residential use.

(4) Accepted agricultural management practices such as seasonal tilling and harvest activities associated with property utilized for private and/or commercial agricultural or silvacultural purpose.

(5) Excavations for improvements, other than those described elsewhere in this section, which exhibit all of the following characteristics:

(a) Does not result in a total displacement of more than 50 cubic yards of material.

(b) Has no slopes greater than 10%.

(c) Has all disturbed surface areas promptly and effectively protected to prevent soil erosion and sedimentation.

(6) Grading, as a maintenance measure, or for landscaping purposes on existing developed land parcels or lots provided that all bare surface is immediately seeded, sodded or otherwise protected from erosive actions and all of the following conditions are met:

(a) The aggregate areas of such activity do not exceed 2,000 square feet.

(b) The change of elevation does not exceed two feet at any point.

(c) The grading does not involve a quantity of fill greater than 18 cubic yards except where excavated from another portion of the same parcel, and the quantity does not exceed 50 cubic yards.

(d) When the preexisting use is a gravel extraction operation, the property owner shall conduct the operation in a manner so as not to devalue abutting properties, to protect abutting property from wind erosion and soil erosion, from increased runoff, sedimentation of reservoirs and drainage systems, and to limit the depth of extraction so as not to interfere with the nearby water table. Where any portion of a proposed development requires approval under the Rhode Island Freshwater Wetlands Act (G.L. § 2-1-15 *et seq.* 2.), as amended, and where said approval contains provision for soil erosion and sediment controls, that approved plan shall be a component of the overall SESC required hereunder for the development.

(7) Grading, filling, removal, or excavation activities and operations undertaken by the Town under the direction of the Director of Public Works for work on streets, roads, or rights-of-way dedicated to public use; provided, however, that adequate and acceptable erosion and sediment controls and controls for other construction wastes, are incorporated in engineering plans and specifications, are followed and employed. Appropriate controls shall apply during construction as well as after the completion of these activities. All such work shall be undertaken in accordance with the performance principles provided for in Section 12.1.11, and such standards and definitions as may be adopted to implement such performance principles.

Section 12.1.6. Provisions of plan - Procedures

(1) To obtain approval for a land disturbing activity as found applicable by the building official or his or her designee under Article III, if the site is less than one (1) acre in size, an applicant shall file an erosion and sediment control plan.

If the site is a total of one (1) acre or greater in size, they shall submit a Soil Erosion and Sediment Control Plan (SESC), signed by the owner of the property, or authorized agent, on which the work subject to approval is to be performed. The plan or drawings, as described in Article V, shall include proposed erosion and sediment control and waste management measures to be employed by the applicant or the applicant's agent.

(2) R.I. Freshwater Wetlands Permit: Where any portion of a proposed development requires approval under any provision of the general laws approved by the general assembly or where the approval contains provisions for soil erosion and sediment controls, that approved plan shall be a component of the overall Soil Erosion and Sediment Control Plan (SESC) required under this ordinance for the development

(3) Construction General Permit: In those cases where a SESC is submitted, the applicant will also submit a copy of the Notice of Intent.

Section 12.1.7. Fees.

(1) The Town may collect fair and reasonable fees from each applicant requesting approval of a SESC for the purpose of administering this ordinance.

(2) At the time of submission of a SESC to the Office of the Building Official or his or her designee, the applicant shall pay a filing fee. This fee is in addition to any required by the R.I. Freshwater Wetlands Act.

(3) The Building Official or his or her designee may waive the filing fee for an applicant who demonstrates that imposition of the filing fee will result in substantial hardship, or that the imposition of the filing fee will make unnecessarily difficult a

project which should enjoy routine approval or which could be beneficial to soil, water, or land resources. Any such determination of waiving a filing fee shall be based upon documentation provided to the Building Official or his or her designee prior to the application for plan approval.

(4) The Building Official or his or her designee may waive the filing fee for an application or request filed by a Town office or agency.

(5) The Building Official or his or her designee may draw upon the fees for costs and expenses in processing applications, plans, and requests; copying plans, technical reports, and other documents for review; advertising, circulating, or otherwise publishing notices and information regarding applications and other matters pending; conducting hearings, meetings, field inspections and other professionally contracted reviews; and communicating with federal and state agencies, consultants and engineers, provided that only those costs and expenses are reasonably attributable to review, approval, disapproval, or other action on plans and determinations of applicability.

(6) This filing fee schedule (*see* Sec. 12.1 – Appendix A) has been determined by the Town to be commensurate with the expenses of providing these municipal services to applicants.

Section 12.1.8. Plan review.

Within ten (10) days of the receipt of a completed SESC, the Building Official or his or her designee shall send a copy of the plan to the review authorities which shall include the Public Works Department, the Planning Board, or Planning Department and Conservation Commission for the purpose of review and comment.

The Building Official or his or her designee shall also within the above time frame submit copies of the SESC to other local departments or agencies, including the Northern Rhode Island Conservation District, in order to better achieve the purposes of this section. Failure of the aforementioned review authorities to respond within forty-five (45) days of their receipt of the plan shall be deemed as no objection to the plan as submitted.

The time allowed for plan review shall be commensurate with the proposed development project, and shall be done simultaneously with other reviews.

Section 12.1.9. Plan approval.

The Building Official or his or her designee shall take action in writing either approving or disapproving the SESC with reasons stated within ten (10) days after the Building Official or his or her designee has received the written opinion of the aforementioned review authorities.

In approving a SESC, the Building Official or his or her designee may attach such conditions deemed reasonably necessary by the aforementioned review authorities to further the purposes of this ordinance. The conditions pertaining to control measures and/or devices, may include, but are not limited to, the erection of walls, drains, dams, and structures, planting vegetation, trees and shrubs, furnishings, necessary easements, good housekeeping and spill prevention measures for construction waste; and specification of the methods for performance and timing of various kinds of work. The applicant/owner shall notify the Building Official or his or her designee in advance of his or her intent to begin clearing and construction work described in the SESC. The applicant shall have the SESC on the site during grading and construction.

Following receipt of a permit, the applicant/owner shall notify the Building Official or his designee at least 72 hours in advance of his intent to begin clearing and construction work on the site as described within the approved SESC.

Projects requiring review and approval from the Planning and/or Zoning Board shall receive Final approvals from the appropriate board prior to commencement of any land disturbing activities as described above.

The applicant shall have an approved copy of the SESC on site for the duration of the project and it shall be made available upon request.

Section 12.1.10. Appeals.

Administrative procedures. If the finding made by the Building Official or his or her designee is unsatisfactory to the applicant/owner, the applicant/owner may file a written appeal. The appeal of plans for SESC shall be in the Zoning Board of Review. Appeal procedures shall follow current requirements for appeal to boards above. During the period in which the request for appeal is filed, and until such time as a final decision is rendered on the appeal, the decision of the Building Official or his or her designee shall remain in effect.

Expert opinion. The official or his/her designee and/or the Zoning Board of Review may seek technical assistance on any SESC. The expert opinion must be made available in the office of the Building Official or his or her designee as a public record prior to the appeals hearing.

Section 12.1.11. Soil Erosion and Sediment Control Plan.

Upon determination of applicability by the Building Official or his or her designee, the erosion and sediment control plan and/or SESC shall be prepared by a registered engineer, or landscape architect or a Certified Erosion, Sediment and Stormwater Inspector (by CPESC, Inc) and copies of the plan shall be submitted to the Building Official or his or her designee.

The SESC shall include sufficient information about the proposed activities and land parcel(s) to form a clear basis for discussion and review and to assure compliance with all applicable requirements of this section. The SESC for proposed activities disturbing a total of one (1) acre or greater shall be prepared in conformance with the requirements for a Soil Erosion and Sediment Control Plan (SESC), as provided in the RI Department of Environmental Management's General Permit for Storm Water Discharge Associated with Construction Activity. For sites disturbing less than one acre, the plan shall be consistent with the data collection, data analysis, and plan preparation guidelines in the current "Rhode Island Soil Erosion and Sediment Control Handbook", prepared by the U.S. Department of Agriculture, Natural Resources Conservation Service, R.I. Department of Environmental Management and R.I. State Conservation Committee, and at a minimum, shall contain:

(1) A brief narrative describing the proposed land disturbing activity and the soil erosion and sediment control measures, waste management measures, and stormwater management measures to be installed to control erosion and mitigate any change in water quality and quantity that could result from the proposed activity. Supporting documentation, such as a drainage area, existing site, and soil maps shall be provided as required by the Building Official or his or her designee.

(2) Construction drawings in detail commensurate with the size of the project, sensitivity of the potentially impacted waterbody and distance to water and/or storm water system. These drawings will illustrate existing and proposed contours, drainage features and vegetation; limit of clearing and grading, the location of soil erosion and sediment control and storm water management measures, detail drawings of measures; stock piles and borrow areas; waste collection and burial areas; concrete truck wash out sites; sequence and staging of land disturbing activities; and other such information needed for construction.

(3) A schedule showing the sequence of construction and inspection and maintenance of erosion and sediment control and waste control measures.

(4) All applicants shall provide other information or construction plans and details as deemed necessary by the Building Official or his or her designee for thorough review of the plan prior to action being taken as prescribed in this section.

(5) Withholding or delay of this information in whole or in part may be reason for the Building Official or his or her designee to judge the application as deficient and shall serve as grounds for disapproval.

(6) If the application is deemed to be incomplete by the Building Official or his designee, he shall send a letter of deficiency to the applicant within 14 (fourteen) days, 25 (twenty-five days) for subdivisions greater than 25 lots and land development projects greater than 21 acres from the date of submission citing those sections of the application which are incomplete.

(7) Erosion and sediment controls. A description, including construction details appropriate to the site, for both vegetative and structural practices. Vegetative BMPs are designed to preserve existing vegetation where attainable and revegetate open areas as soon as practicable after grading or construction. Structural BMPs divert flows from exposed soils, filter runoff, store flows or otherwise limit runoff from coming into contact with exposed, unvegetated areas of the site and to prevent sediments and/or other pollutants from leaving the site.

(8) Post-construction stormwater management. A description of measures that will be installed during the construction project to control pollutants in stormwater discharges that will occur at the site after the construction operations have been completed. These measures shall reflect best practices as described in the most recent RIDEM Stormwater Design and Installation Standards Manual. Maintenance activities for these measures shall be described in accordance with Subsection 12.1.15 below.

(9) Other controls:

(a) Waste disposal: A description of the other controls, including construction details appropriate for the site, to eliminate the discharge of other construction wastes found on the construction site. All types of waste generated at the site shall be disposed of in a manner consistent with state law and/or regulations.

(b) Good housekeeping: Good housekeeping measures to provide for the minimization of exposure of construction debris to precipitation and for the proper disposal of such debris shall be specified.

(c) Spill prevention: Areas where potential spills can occur shall be identified. The potential for spills to enter the stormwater drainage system shall be eliminated wherever feasible.

(d) Maintenance: A description of procedures to maintain, in good and effective operating condition, vegetation, stormwater control measures, and other protective measures, identified in the site plan.

(e) Cost estimate: A description of the cost required to implement all control measures as shown on the plan.

(f) Other information: Other information or construction plans and details as deemed necessary by the Building Official or his designee for thorough review of the plan prior to action being taken as prescribed in this article.

Section 12.1.12. Performance principles.

The contents of the SESC shall clearly demonstrate how the principles, outlined below, have been met in the design and are to be accomplished by the proposed development project.

(1) Pursue Low Impact Design (LID) to the maximum extent possible. LID site planning and design strategies must be used to the maximum extent possible in order to reduce the generation of water runoff volumes for both new and redevelopment projects. In the event any of the following LID strategies are rejected as infeasible at a site, the specific rationale for rejection must be provided by the applicant. LID design includes the following:

a. Protect as much undisturbed open space as possible to maintain predevelopment hydrology and allow precipitation to naturally infiltrate into the ground.
b. Maximize the protection of natural drainage areas, streams, surface waters, and wetlands;
c. Minimize land disturbance including clearing and grading;
d. Minimize soil compaction;
e. Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers, and pesticides;
f. Minimize impervious surfaces;
g. Minimize the decrease in the "time of concentration" from pre-construction to post construction, where "time of concentration" means the time it takes for runoff to travel from the hydraulically most distant point of the drainage area to the point of interest within a watershed;
h. Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems;
i. Break up or disconnect the flow of runoff over impervious surfaces; and
j. Provide source controls to prevent or minimize the use of exposure of pollutants into stormwater runoff at the site in order to prevent or minimize the release of those pollutants into stormwater runoff.

(2) The site selected shall show due regard for natural drainage characteristics and topography.

(3) To the extent possible, steep slopes shall be avoided.

(4) The grade of slopes created shall be minimized.

(5) Post-development runoff rates should not exceed pre-development rates, consistent with other storm water requirements which may be in effect. Any increase in storm water runoff shall be retained and recharged as close as feasible to its place of origin by means of detention ponds or basins, seepage areas, subsurface drains, porous paving, or similar technique.

(6) Original boundaries, alignment, and slope of watercourses within the project locus shall be preserved to the greatest extent feasible.

(7) In general, drainage shall be directed away from structures intended for human occupancy, municipal or utility use, or similar structures.

(8) All drainage provisions shall be of such a design and capacity so as to adequately handle storm water runoff, including runoff from tributary upstream areas which may be outside the locus of the project.

(9) Drainage facilities shall be installed as early as feasible during construction prior to site clearance, if possible.

(10) Fill located adjacent to watercourses shall be suitably protected from erosion by means of rip-rap, gabions, retaining walls, vegetative stabilization, or similar measures.

(11) Temporary vegetation and/or mulching shall be used to protect bare areas and stock-piles from erosion during construction; the smallest areas feasible shall be exposed at any one time; disturbed areas shall be protected during the non-growing months, November through March.

(12) During the growing season, April through October, permanent vegetation shall be placed immediately following fine grading.

(13) Trees and other existing vegetation shall be retained whenever feasible; the area beyond within the dripline shall be fenced or roped off to protect trees from construction equipment.

(14) Construction wastes will be managed to reduce the potential for stormwater runoff to mobilize them and contaminate surface or ground water. The storage, disposal, or use as fill of material containing asphalt, concrete, construction debris or stumps, even if determined to be non-hazardous, is prohibited.

(15) All areas damaged during construction shall be resodded, reseeded, or otherwise restored. Where soil compaction has occurred through storage of materials or use of equipment, soil infiltration shall be restored through use of soil amendments or other means. Monitoring and maintenance schedules, where required, shall be predetermined.

(16) All controls installed or used to achieve compliance with this SESC must be properly operated and maintained at all times.

(17) Sediment controls, stormwater measures, and other controls shall protect downstream water bodies from adverse water quality and quantity impacts resulting from the construction activities.

(18) Groundwater recharge: Stormwater must be recharged to maintain baseflow at predevelopment recharge levels to the maximum extent practicable.

(19) Water quality: Stormwater runoff from a site must be adequately treated before discharge.

(20) Pollution prevention: All development sites require the use of source control and pollution prevention measures to minimize the impact that the land use may have on stormwater runoff quality.

Section 12.1.13. Performance bond.

Before approving a SESC, the Building Official or his or her designee may require the applicant/owner to file a surety company performance bond or deposit of money or negotiable securities or other method of surety, as specified by the Building Official or his or her designee. When any land disturbing activity is to take place within one hundred feet (100') of any watercourse or within an identified flood hazard district, or on slopes in excess of ten percent (10%), the filing of a performance bond or deposit of money or negotiable securities or other method of surety as specified by the Building Official or his or her designee shall be required. The amount of the bond, as determined by the Public Works Department, or in its absence, the Building Official or his or her designee, shall be sufficient to cover the cost of implementing all control measures as shown on the plan.

The bond or negotiable security filed by the applicant shall be subject to approval of the form, content, amount, and manner of execution by the Public Works Director and the Town Solicitor.

A performance bond for a SESC for a subdivision may be included in the performance bond of the subdivision. The posting of the bond as part of the subdivision performance bond does not, however, relieve the owner of any requirement(s) of this ordinance.

Section 12.1.14. Notice of default on performance secured by bond.

(1) Whenever the Building Official or his or her designee shall find that a default has occurred in the performance of any term(s) or condition(s) of the bond or in the implementation of measures secured by the bond, written notice thereof shall be made to the applicant and to the surety of the bond by the Town Solicitor. The notice shall state the nature of default, work to be done, the estimated cost thereof, and the period of time deemed by the Building Official or his or her designee to be reasonably necessary for the completion of the work.

(2) Failure of the applicant to acknowledge and comply with the provisions and deadlines outlined in such notice of default shall mean the institution, by the Town Solicitor, without further notice of proceedings whatsoever, of appropriate measures to utilize the performance bond to cause the required work to be

completed by the Town, by contract or by other appropriate means as determined by the Town Solicitor.

Notice of default on performance secured by certified check. If a certified check has been posted by the applicant, notice and procedure shall be the same as provided for in the preceding Section 12.1.13.

Release from performance bond conditions. The performance bonding requirement shall remain in full force and effect for twelve (12) months following completion of the project, or longer if deemed necessary by the Building Official or his or her designee.

Section 12.1.15. Approval-Expiration-Renewal.

A. *Expiration.* Every approval granted herein shall expire at the end of the time period set forth in the conditions. The developer shall fully perform and complete all of the work required within the specified time period.

B. *Renewal.* If the developer is unable to complete the work within the designated time period, he or she shall, at least thirty (30) days prior to the expiration date, submit a written request for an extension of time to the Building Official or his or her designee, setting forth the reasons underlying the requested time extension. If the extension is warranted, the Building Official or his or her designee may grant an extension of time up to a maximum of one year from the date of the original deadline. Subsequent extensions under the same conditions may be granted at the discretion of the Building Official or his or her designee.

Section 12.1.16. Maintenance of measures.

Maintenance of all erosion-sediment control devices under this ordinance shall be the responsibility of the owner. The erosion-sediment control measures and controls for other wastes shall be maintained in good condition and working order on a continuing basis. Watercourses originating and located completely on private property shall be the responsibility of the owner to their point of open discharge at the property line or at a communal watercourse within the property.

Section 12.1.17. Liability of applicant.

Neither approval of a SESC nor compliance with any condition of this Section shall relieve the owner/applicant from any responsibility for damage to persons or property, nor impose any liability upon the Town for damages to persons or property.

Section 12.1.18. Inspections.

Section 12.1.18.1. Periodic inspections.

The provisions of this ordinance shall be administered and enforced by the Building Official or his or her designee. All work shall be subject to periodic inspections by the Building Official or his or her designee. All work shall be performed in accordance with an inspection and construction control schedule approved by the Building Official or his or her designee, who shall maintain a permanent file on all of his or her inspections.

The owner or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved Erosion and Sediment Control Plan. The purpose of such inspections will be to determine the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be conducted by a properly trained professional recognized as a Certified Erosion, Sediment and Storm Water Building Official or his or her designee (CESSWI) by the Certified Professional in Erosion and Sediment Control (CPESC, Inc). All inspections shall be documented in written form and submitted to the building official as requested.

The building official or his or her designee will perform a minimum of two (2) inspections; one during construction and one after final stabilization of the site. The developer or owner shall notify the building official of the installation of erosion and sediment control measures, in order for an inspection to be performed during the construction phase of the project. The building official or his/her designee will confirm that wastes are controlled and that the erosion and sediment control practices are installed as planned, meet the needs of the site and conform with the RI Erosion & Sediment Control Handbook.

12.1.18.2. Final inspection.

(1) Upon completion of all work, the developer shall notify the Building Official or his or her designee that all grading, drainage, erosion and sediment control measures and devices, vegetation and ground cover plantings, and controls for other wastes have been completed in conformity with the approval; all attached plans, specifications, and conditions; and other applicable provisions of this article.

(2) Upon notification of the completion by the owner, the Building Official or his or her designee shall make a final inspection of the site in question and shall prepare a final summary inspection report of its findings which shall be retained in the Office of the Building Official or his or her designee and in the Department of Public Works permanent inspections file.

(3) The applicant/owner may request the release of his/her performance bond from the Building Official or his or her designee twelve (12) months after the final site inspection has been completed and approved. In the instance where the performance bond has been posted with the recording of a final subdivision, the bond shall be released after the Building Official or his or her designee has been notified by the Town Planner of successful completion of all plat improvements by the applicant/owner.

Section 12.1.19. Approval under state Freshwater Wetlands Act.

Where any portion of a proposed development requires approval under the state Freshwater Wetlands Act and where the approval contains provisions for soil erosion and sediment controls, that approved plan shall meet the requirements of the SESC Plan required by this article for the development.

Section 12.1.20. Notification, non-compliance.

If, at any stage, the work-in-progress and/or completed under the terms of an approved SESC does not conform to the plan, a written notice from the Building Official or his or her designee to comply shall be transmitted by certified mail to the owner. The notice shall set forth the nature of the temporary and permanent corrections required and the time limit within which corrections shall be completed. Failure to comply with the required corrections within the specified time limit shall be considered in violation of this section, in which case the performance bond or cash or negotiable securities deposit shall be subject to notice of default.

Section 12.1.21. Penalties.

Section 12.1.21.1. Revocation of suspension of approval.

The approval of a SESC under this Section may be revoked or suspended by the Building Official or his or her designee and all work on the project halted for an indefinite time period by the Building Official or his or her designee after written notification is transmitted by the Building Official or his or her designee to the developer for one or more of the following reasons:

(1) Violation of any condition of the approved plan or specifications pertaining thereto.

(2) Violation of any provision of this chapter or any other applicable law, ordinance, article, rule, or regulation related to the work or site of work.

(3) The existence of any condition or the performance of any act constituting or creating a nuisance, hazard, or endangerment to human life or the property of others or contrary to the spirit or intent of this chapter.

12.1.21.2. Other penalties.

In addition, thereto, whenever there is a failure to comply with the provisions of this Section, the Town shall have the right to notify the applicant/owner that he must cease work immediately and/or has twenty-four (24) hours from the receipt of notice to temporarily correct the violations and thirty (30) days from receipt of notice to permanently correct the violations.

Should the applicant/owner fail to take the temporary corrective measures within the twenty-four (24) hour period and the permanent corrective measure within the thirty-day (30) period, the Town shall then have the right to take whatever actions it deems necessary to correct the violations and to assert a lien on the subject property in an amount equal to the costs of remedial actions. The lien shall be enforced in a manner provided or authorized by law for the enforcement of common law liens on personal property. The lien shall be recorded with the records of land evidence of the Town, and the lien shall incur legal interest from the date of recording. The imposition of any penalty shall not exempt the offender from compliance with the provisions of this Section, including revocation of the performance bond or assessment of a lien on the property by the Town.

A reinspection fee shall be required.

Section 12.1.22. Definitions of Selected Terms.

The following words, terms, and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant: Any person(s), corporation, or public or private organization proposing a development which would involve disturbance to the natural terrain as herein defined.

Best Management Practices ("BMPs"): Schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, solid waste disposal, or drainage from raw materials storage.

Construction wastes: Solid and/or liquid wastes generated from the construction/site development process. This includes, but not limited to, discarded building materials, concrete truck washout, chemicals, litter, sanitary wastes, and fill material containing asphalt and concrete.

Cut: An excavation. The difference between a point on the original ground and a designated point of lower elevation on the final grade. Also, the material removed in excavation.

Development project: Any construction, reconstruction, demolition, or removal of structures, roadways, parking, or other paved areas, utilities, or other similar facilities, including any action requiring a building permit by the Town.

Disturbed area: An area in which the natural vegetative soil cover has been removed or altered and, therefore, susceptible to erosion.

Erosion: The removal of mineral and/or organic matter by the action of wind, water, and/or gravity.

Excavate: Any act by which earth, sand, gravel, rock, or any other similar material is dug into, cut, removed, displaced, relocated, or bulldozed and shall include the conditions resulting therefrom.

Fill: Any act by which earth, sand, or other material is placed or moved to a new location aboveground. The fill is also the difference in elevation between a point of existing undisturbed ground and a designed point of higher elevation of the final grade.

Gabion: A rectangular or cylindrical wire mesh cage (wire basket) filled with rock and used as a protecting agent, revetment, etc., against erosion.

Land disturbing activity: Any physical land development activity which includes such actions as clearance of vegetation, moving or filling of land, removal or excavation of soil or mineral resources, or similar activities.

Limit of disturbance: Line delineating the boundary of the area to be disturbed during a development or redevelopment project. Area outside this boundary shall not be touched.

Multifamily: Any site, property, building, structure intended for use by more than one family, including but not limited to apartments, condominiums, duplexes, and townhouses.

Reinspection Fee: The fee charged to the applicant or owner for repeated inspections necessitated by any oversight in the compliance with the approved soil erosion sediment control plan.

Sediment: Solid material, both mineral and/or organic, that is in suspension, is being transported, or have been moved from its site or origin by wind, water, gravity or ice as a product of erosion.

Soil amendment: Any material, such as compost, lime, animal manures, crop residues, etc., that is worked into the soil. Generally pertains to materials other than fertilizers.

Soil Erosion and Sediment Control ("SESC"): The approved document required before any person may cause a disturbance to the natural terrain within the Town as herein regulated. The document may also be referred to as "SESC Plan".

Runoff: The surface water discharge or rate of discharge of a given watershed after a fall of rain or snow and including seepage flows that do not enter the soil but run off the surface to the land. Also, that portion of water that is not absorbed by the soil, but runs off the land surface.

Watercourse: The term watercourse shall be held to mean any tidewater or coastal wetland at its mean high water level, and any freshwater wetland at its seasonal high water level, including but not limited to, any river, stream, brook, pond, lake, swamp, marsh, bog, fen, wet meadow, or any other standing or flowing body of water. The edge of the watercourse as herein defined shall be used for delineation purposes.

Section 12.1.23. Severability.

If any provision of this ordinance or any rule or determination made hereunder, or application hereof to any person, agency, circumstances is held invalid by a court of competent jurisdiction, the remainder of this ordinance and its application to any person, agency or circumstances shall not be affected thereby. The invalidity of any section or section of this ordinance shall not affect the validity of the remainder of this Section.

Section 12.1.A – Appendix A: Review Fee Schedule

In accordance with Sec.12.1.7(6), the following shall be the fees required under this ordinance:

(A) Single-Family Subdivisions:

Number of Lots	Review & Filing Fee
1	$150
2	$200
3	$250
4-8	$350
9-15	$450
16-25	$550
26+	$650, plus $30 per lot over 26

Single-Family Subdivisions shall also be subject to a $300 per lot Inspection Fee with a maximum Inspection Fee of $2,000 per application.

(B) Site Plans (commercial, industrial, parking lots, pipelines, utilities, roads, public facilities, land grading, quarrying, mining, landfills and demolition) and Multi-Family (apartments, condominiums, townhouses, etc.):

Acreage	Review & Filing Fee
Less than 1	$300
1-1.99	$400
2-5.99	$500
6-10.99	$600
11-20.99	$700
21-50.99	$800
51+	$1000, plus $30 per acre for each acre over 51 (rounded to the nearest full acre)

Site Plans and Multi-Family shall also be subject to a $150 Inspection Fee for up to 1 acre, plus $30 per each additional disturbed acre beyond 1 acre (rounded to the nearest full acre) with no maximum fee.

ARTICLE II – POST-CONSTRUCTION STORMWATER CONTROL

Section 12.2 Post-Construction Stormwater Control Ordinance

In order to comply with the stormwater post-construction control requirements of RIPDES Permit No. RIR040027 (Scituate coverage under the General Permit)

Section 12.2.1 Purpose

(a) Unmitigated storm water from areas altered by development may pose public health and safety threats. Potential contaminants in storm water runoff may include suspended solids, nitrogen, phosphorus, hydrocarbons, heavy metals, pathogenic organisms (bacteria and viruses), and road salts.

(b) This article establishes the administrative mechanisms necessary for the Town to ensure proper storm water management of runoff from new development and redevelopment projects. The ordinance from which this article is derived is written to work in conjunction with the Rhode Island Department of Environmental Management's General Permit, Rhode Island Pollutant Discharge Elimination System (RIPDES) Storm Water Discharge from Small Municipal Separate Storm Sewer Systems and from Industrial Activity at Eligible Facilities Operated by Regulated Small MS4s.

(c) This ordinance is responsive to Rhode Island General Laws § 45-61.2-1 (a) Findings. The general assembly hereby recognizes and declares that:

(1) Stormwater, when not properly controlled and treated, causes pollution of the waters of the state, threatens public health, and damages property. Stormwater carries pollutants into rivers, streams, ponds, coves, drinking water aquifers and Narragansett Bay;

(2) Stormwater reaches the state's waters by streets, roads, lawns and other means. As a result, public use of the state's natural resources for drinking water, swimming, fishing, shell fishing and other forms of recreation is limited and, in some cases, prohibited;

(3) Development often results in increased stormwater runoff by increasing the size and number of paved and other impervious surfaces within the state, and decreasing the amount of natural surface areas that naturally control stormwater runoff through natural filtration and groundwater recharge systems;

(4) Development in the Town of Scituate will strive to maintain predevelopment groundwater recharge and infiltration on site to the maximum extent practicable;

(5) Demonstrate that post-construction stormwater runoff is controlled, and that post development peak discharge rates do not exceed pre-development peak discharge rates; and

(6) Use low impact-design techniques as the primary method of stormwater control to the maximum extent practicable.

Section 12.2.2 Definitions.

For the purposes of this section, the following words and terms shall have the meanings respectively ascribed, unless the context otherwise requires:

Applicant means any person proposing a development project in accordance with this article. The applicant must be the person who holds a valid purchase and sales agreement for the real property associated with said development project.

Authorized enforcement agent means the building official, zoning official, town engineer, or other town official authorized to enforce standards in accordance with this article.

Best Management Practice ("BMP") means any structural and nonstructural means applied to a development project with the intent of controlling storm water flow and quality. Best management practices include, but are not necessarily limited to, means of storm water management described in with the Rhode Island Stormwater Design and Installation Standard Manual ("RISDISM"), as amended. Use and acceptability of best management practices is at the discretion of the town.

Development project means any construction, reconstruction, demolition, or removal of structures, roadways, parking, or other paved areas, utilities, or other similar facilities, including any action requiring a building permit by the town.

Low-impact development means a best management practice intended to maintain or replicate predevelopment hydrology through the use of site planning, source control, and small-scale structures integrated throughout the site to prevent, infiltrate and manage storm water as close to its source as possible. Low-impact development practices include, but are not necessarily limited to, those described in the state storm water design and installation standards manual, as amended. use and acceptability of low-impact development practices is at the discretion of the town.

Owner or operator means any person who holds legal title to any real property, development project or structural best management practice; or has possession or control of any real property, development project or structural best management practice through any agent, executor, administrator, trustee or guardian of the estate of a holder of a legal title.

Person shall include an individual, trust, firm, joint stock company, corporation (including a quasi-governmental corporation), partnership, association, syndicate, municipality, municipal or state agency, fire district, club, non-profit agency or any subdivision, commission, department, bureau, agency or department of state or federal government (including any quasi-governmental corporation) or of any interstate body.

Storm water management plan means a plan that prescribes site design elements and construction practices, that if employed, improves area water quality by preventing harmful pollutants from being carried by stormwater runoff into local water bodies.

Storm water means the surface discharge of water associated with a precipitation event or snowmelt.

Section 12.2.3 Applicability

This article shall apply to all subdivision and land development applications that disturb one (1) acre or more of land. No person shall engage in development projects without receiving approval from the building official and or Plan Commission unless specifically exempted by Section 12.2.4.

Section 12.2.4 Exemptions

The following development projects do not require written approval pursuant to this article:

(1) Construction, alteration, or use of any additions to existing single-family or two-family homes or related structures, when determined by the building official to be insignificant, and such construction, alteration and use does not exceed one (1) acre of land, does not occur within 200 feet of any watercourse or coastal feature, and the slopes at the site of land disturbance do not exceed ten percent.

(2) Accepted agricultural management practices such as seasonal tilling and harvest activities associated with property utilized for private or commercial agricultural or silvicultural purposes.

(3) An excavation which exhibits all of the following characteristics:

(a) Is less than four feet in vertical depth at its deepest point as measured from the average elevation of the natural ground surface.

(b) Does not result in a total displacement of more than 50 cubic yards of material on any lot, land, parcel or subdivision.

(c) Has no slopes steeper than ten feet vertical in 100 feet horizontal (ten percent).

(d) Has all disturbed surface areas promptly and effectively protected to prevent soil erosion and sedimentation from occurring including seeding or sodding, and provided that all disturbed surface areas which will be exposed for a period of time in excess of 30 days shall be covered with a suitable temporary protective ground cover until permanent ground cover is in place.

(4) Grading, as a maintenance measure, or for landscaping purposes on existing developed land parcels or lots, provided that all of the following conditions are met:

(a) The aggregate area of activity does not exceed 1 acre.

(b) All bare surface area is promptly seeded, sodded, or otherwise effectively protected from erosive actions.

(5) Grading, filling, removal or excavation activities and operations undertaken by the town under the direction and supervision of the Director of Public Works for work on streets, roads or rights-of-way dedicated to public use; provided, however, that adequate and acceptable erosion and sediment controls are incorporated in engineering plans and specifications and employed. Appropriate controls shall apply during construction as well as after the completion of such activities.

(6) Use of a home garden in association with residential use.

Section 12.2.5 Variance

The building official reviewing an application under this article may:

(1) Vary requirements of this article when strict implementation of the requirements will create an unnecessary hardship or are not feasible.

(2) Allow use of an innovative management practice where strict adherence to existing criteria would be costly or of negligible environmental benefit.

(3) Allow use of an innovative management practice where the innovative practice is expected to have an environmental benefit, which cannot be practicably realized using standardized management practices.

Section 12.2.6 Submissions and Approvals

A. In accordance with this article, all persons must obtain approval from the building official prior to engaging in any development project, unless exempted by Section 12.2.4. To obtain approval applicants must demonstrate compliance with all policy, standards and requirements of this article to the satisfaction of the building official. Applicants may demonstrate compliance via submission of materials and documentation including but not limited to a storm water management plan, site plan and maintenance agreement in accordance with this article. Plans will be reviewed in conjunction with site plan reviewed by the building official.

B. Pre-application meetings may be requested by the applicant and held at the discretion of the town for the purpose of informing the representatives of construction projects of any local requirements, state environmental permitting requirements, and any additional limitations that may be imposed.

Section 12.2.7 Technical Standards

All applicants are required to develop and submit a storm water management plan prepared by a professional engineer licensed in the state. All storm water management plans must address storm water management on a site-by-site basis and all requirements of this article. All storm water management practices shall be consistent with the RISDISM and the state soil erosion and sediment control handbook, as amended.

(1) Performance standards. Storm water management plans shall incorporate structural and nonstructural best management practices for water quality control, in accordance with the state storm water design and installation standards manual. Development in special resource protection waters or watersheds of impaired waters as defined pursuant to the state water quality regulations may be held to higher standards. As part of such higher standards, low-impact development shall be used as the primary method of storm water control to the maximum extent practicable to manage water quality and maintain groundwater recharge to predevelopment levels.

(2) Disallowed storm water best management practices. The placement of storm water structures within a floodplain shall be avoided. If there is no alternative, the applicant must show what effects, if any, the tailwaters created by the floodplain will have on the outflow and effective storage capacity of the storm water best management practice.

(3) Facilitation of maintenance. Facilities that require maintenance shall be designed to minimize the need for regular maintenance, facilitate required maintenance, and ensure accessibility of components that require maintenance. At a minimum, all storm water management plans must incorporate best management practices with appropriate maintenance design in accordance with the state storm water design and installation standards manual, as amended.

(4) Flood protection. Storm water management plans shall demonstrate that a proposed project provides for protection of life and property from flooding and flood flows. Water quantities must be controlled in accordance with the RISDISM, as amended, or a municipally approved regional storm water management plan for the watershed in which the project site is located. Storm water management plans shall demonstrate incorporation of the following standards into the proposed project:

(a) Control and maintenance of post-development peak discharge rates from the 1-year, 2-year, 10-year, 25-year, and 100-year storm events to predevelopment levels.

(b) Downstream analysis of the 100-year storm event and control of the peak discharge rate for the 100-year storm to mitigate downstream impacts.

(c) Discharge from any storm water facility must be conveyed through properly constructed conveyance system to provide for nonerosive flows during all storm events. The proposed storm water conveyance system consisting of open channels, pipes, and other conveyance devices shall at a minimum accommodate the runoff from a 25-year storm event. The storm water conveyance system must provide for nonerosive flows to receiving waters.

(5) Surface water and groundwater. Storm water management plans shall, in accordance with the RISDISM, as amended, demonstrate that during development and post-development, all receiving waters will be recharged in a manner closely resembling predevelopment conditions and that the developed site will retain hydrological conditions that closely resemble of those prior to disturbance. The goal of the storm water design shall be that hydrologic conditions in each subwatershed match predevelopment conditions.

Where practicable, development and redevelopment projects should aim to reduce runoff volumes. This may include minimizing and eliminating impervious surface areas such as roads, parking, paving or other surfaces, encouraging infiltration of noncontaminated runoff, preventing channelization, encouraging sheet flow, and where appropriate, preserving, enhancing or establishing buffers along surface water bodies and tributaries.

Section 12.2.8 Stormwater Management Plans

(a) Calculations. In addition to the information required for the site plan the following information must also be included with the application, where applicable:

(1) The area of each subwatershed shall be identified on final site plans.

(2) The area of impervious surfaces (including all roads, driveways, rooftops, sidewalks, etc.) for each sub-basin as identified in the state storm water design and installation standards manual, as amended.

(3) Weighted curve numbers as determined using urban hydrology for small watersheds (USDA Soil Conservation Service, 1986 or as amended).

(4) Invert elevations for inlets and outlets. In addition, invert elevations shall be provided for all basins including permanent and/or flood pool stages, including peak discharge rates for each stage.

(5) The total volume capacity for all flood control and water quality best management practices (e.g., infiltration basin, detention basins, wet ponds, etc.). Volumes must be segregated into permanent and flood pool stage volumes where applicable. Furthermore, the volumes of all sediment storage (basins, forebays, etc.) areas must also be provided.

(6) Predevelopment and post-development peak discharge rates and runoff volumes for the 1-year, 2-year, 10-year, 25-year, and 100-year frequency storm events for each subwatershed to each separate water or discharge point. The water quality volume (WQV) must also be calculated for each subwatershed. All relevant variables such as curve numbers and time of concentration, along with the supporting computations and worksheets must be included. The entire site shall be included in an evaluated subwatershed.

(7) Supporting calculations to demonstrate that the proposed development project will meet section 12.2.7.

(b) Narrative description. As part of the storm water management plan, the applicant shall include a discussion of the protection of environmental resource functions and values. The following outline is provided as guidance for preparing a narrative description for the storm water management plan. Depending on the size and scope of the proposed project, the amount of information required by the town may vary; therefore, it is advised to consult the town for specific requirements.

(1) Site description. General topography, soil types, current vegetative composition and relative abundance, existing infrastructure, and/or adjacent properties, identification of major resources (e.g., wetlands, groundwater, surface waters, etc.), name of receiving water(s), potential water quality and/or hydrologic impacts on resources.

(2) Site input data. Watershed characteristics, area of all impervious surfaces, total area of site, annual mean rainfall, runoff coefficients, curve numbers for various land uses, peak discharge rates.

(3) Land use planning and source control plan.

(4) Best management practices. Identify the type of best management practice(s) employed both during and post construction and justification for selection, including any deviation from the state storm water design and installation standards manual, as amended, and the potential effect on pollutant removal efficiency.

(5) Technical feasibility. Include sizing, location, hydraulic and environmental impacts. Alternatives, which were considered but determined not to be feasible, should also be discussed.

(6) Maintenance schedule of best management practices to be used, both during and post construction including frequency of inspection and maintenance.

Section 12.2.9 Inspections for Stormwater Best Management Practices (BMPs)

The Town shall have the right to inspect best management practices constructed after the passage of the ordinance from which this article is derived. Inspections shall address whether best management practices have been installed in accordance with approved storm water management plans.

Section 12.2.10 Operation and Maintenance Requirements for BMPs

A. Routine operation and maintenance and repair procedures. Routine maintenance shall be performed on a regular basis to ensure proper performance and may include such routine procedures as training of staff, periodic inspections, grass cutting elimination of mosquito breeding habitats, and pond maintenance in accordance with a storm water management plan approved pursuant to this article. Repair procedures may be required to correct a problem or malfunction of a best management practice and to restore the management practice's intended operation and safe condition. Repairs may include such procedures as structural repairs, removal of debris, sediment and trash removal, erosion repair, snow and ice removal, fence repair, mosquito extermination, and restoration of vegetated and non-vegetated linings.

B. General operation and maintenance standards for storm water best management practices. Maintenance design and maintenance procedures for all best management practices shall be documented in storm water management plans in accordance with the state storm water design and installation standards manual, as amended; or manufacturer's specifications. A maintenance schedule for each type of best management practice must be included in the storm water management plan. These schedules shall list the frequency and type of maintenance operations necessary along with the legally responsible party's name, address, and telephone number. The owner, as well as all future owners, shall be required to implement the maintenance schedule of the best management practices. If the storm water facility is to be deeded to the town, the applicant must obtain a letter from the town acknowledging maintenance responsibility and intent of ownership.

Section 12.2.11 Maintenance Agreements

(a) Maintenance agreements shall provide written, contractual documentation, which demonstrates compliance with this article and legal arrangements for the upkeep of storm water facilities to assure their proper function and safety in accordance with this article.

(b) After final construction is completed, the owner or responsible person shall maintain "as built" plans of storm water management practices located on site. The plans must show the final design specifications for all storm water management facilities and must be certified by a professional engineer.

(c) Maintenance agreements, which describe maintenance schedules and requirements, must be developed for each storm water management facility unless the facility is dedicated to and accepted by the town. Schedules shall be based on the complexity and frequency of maintenance needs and shall be subject to the approval of the town. At a minimum, maintenance frequency should be in accordance with the RISDISM, as amended.

(d) Right of entry. Upon the presentation of credentials and other documents, as may be required by law, or if authorized by the owner or other party in control of the property, the Director of Public Works, Building Official, Zoning Officer, and other town representatives designated by the Building Official, Zoning Officer, or Director of Public Works may enter upon privately owned property for the purpose of performing their duties under this article and may make or cause to be made such inspections as the town deems reasonably necessary.

(e) Record keeping for maintenance activities. Maintenance agreements shall include provisions for maintenance record keeping. All activities conducted in accordance with a maintenance agreement must be recorded in a work order and inspection log. Timely updates of the log shall be the responsibility of the storm water management facility owner or other responsible party pursuant to this article. Review of the maintenance and inspection log shall be completed by the town to determine the effectiveness of operation, maintenance and safety activities. Reviews shall occur as part of each on-site inspection. Additional reviews may be made as deemed appropriate by the town.

(f) Responsibility for maintenance to assure function and safety. Appropriate maintenance to assure function and safety of storm water management facilities shall be the responsibility the owner or may be assumed by another party via a written contractual arrangement in accordance with this article.

(g) Alterations to maintenance agreements. Any alterations in maintenance responsibility or alterations to maintenance agreements must be either reviewed and approved by the planning board (as applicable) or building official or designee. If portions of the land serviced by a storm water management facility are to be sold, written contractual arrangements shall be made to pass all responsibility of the maintenance agreement to the purchaser and shall be subject to review and approval of the department of public works or designee. All alterations to maintenance agreements shall be made and recorded in accordance with this article.

Section 12.2.12 Application Fees

The Town shall be empowered to collect fees from permit applicants, which are commensurate with the cost of administering this article.

Section 12.2.13 Notification of Noncompliance

If the authorized enforcement agent finds a violation of this article then a written notice from the authorized enforcement agent to compel correction shall be transmitted to the owner or operator. Such notice shall set forth the nature of corrections required and the time limit within which corrections shall be completed. Failure to comply with the required corrections within the specified time limit shall be considered a violation of this chapter.

Section 12.2.14 Appeal of Notice of Noncompliance

Any person receiving a notice of noncompliance may appeal the determination of the authorized enforcement agent. The appeal must be received within 30 days from the date of the receipt of the notice of noncompliance. The appeal shall be in writing and contain a detailed basis upon which the appeal was taken. The authorized enforcement agent shall then determine whether to accept the appeal or proceed to cause summons of the appellant in accordance with section 12.2.15.

Section 12.2.15 Penalties for Violation

Any person who shall violate any provision of this article shall be punished in accordance with section 12.20. The authorized enforcement agent may, at the discretion of the court, undertake measures necessary to abate the violation and restore the property at the owner or operators expense.

Section 12.2.16 Cost of Abatement of the Violation

Within 30 days after abatement of the violation by or under the direction of the authorized enforcement agent, the owner or operator will be notified by the authorized enforcement agent of the cost of abatement, including administrative costs. If the amount due is not paid within a timely manner as determined by the authorized enforcement agent, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. Any person violating any of the provisions of this section shall become liable to the Town by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of 12 percent per annum shall be assessed on the balance beginning on the 31st day following discovery of the violation.

Section 12.2.17 Revocation or Suspension of Approval

The approval of a storm water management plan under this chapter may be revoked or suspended by an authorized enforcement agent and all work on the development or redevelopment project halted for an indefinite time period after written notification is transmitted by the authorized enforcement agent to the owner or operator for one or more of the following reasons:

(1) Violation of any condition of the approved plan, or specifications pertaining thereto.

(2) Violation of any provision of this article.

(3) The existence of any condition or the performance of any act constituting or creating a nuisance, hazard, or endangerment to human life or property of others, or contrary to the spirit or intent of this article.

Section 12.2.18 Remedies not Exclusive

The remedies listed in this article are not exclusive of any other remedies available under any applicable federal, state, or local law and it is within the discretion of the authorized enforcement agent to seek cumulative remedies.

ARTICLE III – ILLICIT DISCHARGE OF STORMWATER

Section 12.3.1 Purpose

Contaminated storm water runoff is a major cause of impairment of water quality in lakes, ponds, streams, rivers, wetlands, and groundwater; contamination of drinking water supplies; and alteration or destruction of aquatic and wildlife habitat. Regulation of illicit connections and discharges to the municipal storm drain system is necessary for the protection of Town water bodies and groundwater, and to safeguard the public health, safety, welfare, and the environment. The objectives of this ordinance are:

(1) To prevent, or reduce to the maximum extent practicable, pollutants from entering the Town owned storm drainage system;

(2) To prohibit illicit connections and unauthorized discharges to the storm water drainage system;

(3) To require the removal of all such illicit connections and discharges;

(4) To comply with state law and federal statutes and regulations relating to storm water discharges; and

(5) To set forth the legal authority and procedures to carry out all inspection, detection, monitoring, and enforcement activities necessary to ensure compliance with this ordinance.

Section 12.3.2 Authority

This ordinance is promulgated pursuant to the Rhode Island Department of Environmental Management's ("DEM") General Permit Rhode Island Pollutant Discharge Elimination System Storm Water Discharge from Small Municipal Separate Storm Sewer Systems (MS4) and from Industrial Activity at Eligible Facilities Operated by Regulated Small MS4s ("MS4 General Permit") and in accordance with the Administrative Procedures Act, R.I.G.L. § 42-35-1, *et seq.*

Section 12.3.3 Definitions

The following words, terms and phrases, when used in this ordinance, shall have the meanings ascribed to them in this section:

Allowable Non-Storm Water Discharges- Discharges not comprised of storm water are allowed under the MS4 General Permit Part I.B.3 but are limited to the following, provided these are not significant contributors of pollutants to the MS4: discharges which result from the washdown of vehicles at retail dealers selling new and used automobiles where no detergents are used and individual residential car washing; external building washdown where no detergents are used; the use of water to control dust; fire-fighting activities; fire hydrant flushings; natural springs; uncontaminated groundwater; dechlorinated pool discharges; air conditioning condensate; lawn watering; potable water sources including waterline flushings; irrigation drainage; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents are not used; discharges from foundation or footing drains where flows are not contaminated with process materials such as solvents, or contaminated by contact with soils where spills or leaks of toxic or hazardous materials have occurred; uncontaminated utility vault dewatering; dechlorinated water line testing water; hydrostatic test water that does not contain any treatment chemicals and is not contaminated with process chemicals.

Best Management Practices ("BMPs")- Schedules of activities, prohibitions of practices, general good house-keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices; and structures, to prevent or reduce the discharge of pollutants directly or indirectly to storm water, receiving waters, or storm water conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Clean Water Act ("CWA")- The federal Water Pollution Control Act (33 U.S.C. § 1251 *et seq.*), and any subsequent amendments thereto.

Construction Activity- Activities subject to RIPDES Construction Permits, which includes construction projects resulting in land disturbance of one acre or more; and activities resulting in land disturbance of less than one acre which are subject to Planning Board approval. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Director means the Director of Public Works, or his authorized deputy, agent or representative.

Discharger- Any person who causes, allows, permits, or is otherwise responsible for a discharge, including, without limitation, any operator of a construction site or industrial facility.

Hazardous Material- Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, radioactive, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illicit Connection- An illicit connection is defined as either of the following:

(a) Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by the Director, or,

(b) any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by the Director.

Illicit Discharge- Any direct or indirect discharge to a municipal storm drainage system that is not composed entirely of storm water, except discharges pursuant to a RIPDES permit (other than the RIPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities. Illicit discharges include, but are not limited to, discharges in the form of illegal dumping, hazardous waste/material spills, sewage and wastewater, construction waste, building material, truck washout, litter, and those allowable storm water discharges found to be a significant contributor of pollutants to the MS4.

Industrial Activity- Activities subject to RIPDES Industrial Storm Water Permits as defined in RIPDES Rule 31 (b) (15).

Municipal Separate Storm Sewer System (MS4)- A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural and man-made channels and watercourses, piped storm drains, retention and detention basins, and other drainage structures), owned or operated by the Town, or proposed for ownership or operation by the Town, and designed or used for collecting or conveying storm water, and that is not used for collecting or conveying sewage. (Also known as the 'storm drainage system'.)

Non-Storm Water Discharge- Any discharge to the storm drain system, or that has the potential to enter the storm drain system, that is not composed entirely of storm water.

Operator- The party or parties that either individually or taken together have the day-today operational control over the facility activities and the ability to make modifications to such activities.

Owner- The party or parties that either individually or taken together has legal title to any premise.

Person- Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

Pollutants- Anything that causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal and pet wastes; soil, sediment/ fines resulting from land disturbing activities; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

RIPDES- Rhode Island Pollution Discharge Elimination System means the Rhode Island system for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing point source discharge permits and imposing and enforcing pretreatment requirements pursuant to Title 46, Chapter 12 of the General Laws of Rhode Island and the Clean Water Act.

Storm Water- Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Storm Water Management Program Plan ("SWMPP")- the municipal document describing a program to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, protect water quality, and satisfy the water quality requirements of the Federal Clean Water Act and Rhode Island Water Quality Standards; and which includes the following six minimum control measures: Public Education and Outreach, Public Involvement/ Participation, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control, Post Construction Storm Water Management, and Pollution Prevention and Good House Keeping in Municipal Operations.

Storm Water Pollution Prevention Plan ("SWPPP")- A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to storm water, storm water conveyance systems, and/or receiving waters to the maximum extent practicable.

Watercourse- A natural or man-made surface drainage channel or body of water (Including a lake or pond) through which a water flow occurs, either continuously or intermittently.

Waters of the State- Surface and ground waters within the boundaries of the State of Rhode Island and subject to its jurisdiction.

Section 12.3.4 Discharge Prohibitions

(a) Prohibition of Illicit Discharges

No person shall throw, drain, or otherwise discharge or cause to be discharged into the municipal storm drainage system any pollutant or non-storm water discharge unless such a non-storm water discharge is outlined in Part I.B.3 of the MS4 General Permit as an Allowable Non-Storm Water Discharge, or is authorized by a specific RIPDES permit. The allowable non-storm water discharges are permitted if deemed not to be a significant contributor of pollutants to the municipal storm drainage system. Allowable non-stormwater discharges will not be permitted under any circumstance when said discharge adversely affects a municipal right-of-way or stormwater system.

Reports of illegal dumping, hazardous waste and material spills, and other complaints will be investigated under the purview of this ordinance, and Ordinance No. 28, and other applicable State and Federal laws.

The commencement, conduct, or continuance of any illicit discharge to the storm drainage system is prohibited.

(b) Prohibition of Illicit Connections

The construction, use, maintenance or continued existence of illicit connections to the municipal storm drain system is prohibited. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4 or any watercourse, or allows such a connection to continue.

Improper connections in violation of this ordinance must be disconnected, and if necessary, redirected to an approved onsite wastewater management system upon approval of the RIDEM, or to the sanitary sewer system.

Section 12.3.5 Right of Entry

Entry to Perform Duties Under this Ordinance.

To the extent permitted by State law, or if authorized by the owner or other party in control of the property, the Director, and/or his designees may enter upon privately owned property for the purpose of performing their duties under this ordinance and may make or cause to be made such inspections, surveys, testing, or sampling as the Director deems reasonably necessary.

Section 12.3.6 Inspections and Monitoring

The Director shall be permitted, upon the presentation of credentials and other documents as may be required by law, to:

(1) Enter the dischargers premise(s) where a regulated activity is conducted, or where records must be kept related to storm water compliance;

(2) Have access to and copy, at reasonable times, any records related to storm water compliance;

(3) Inspect at reasonable times any equipment, practices, or operations related to storm water compliance; and

(4) Take samples, perform testing, or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring compliance with this ordinance or as otherwise authorized by the CWA or R.I. law.

(5) Require that the owner or occupant of the property locate any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to the storm drain system; and to identify the drain or conveyance as storm drain, sanitary sewer, or other, and that the outfall location or point of connection to the storm drain system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the Director.

Section 12.3.7 Suspension of MS4 Access

Suspension due to Illicit Discharges in Emergency Situations. The Director may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened non-storm water discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the State. If the violator fails to comply with a suspension order issued in an emergency, the Director may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the State, or to minimize danger to persons. (b) Suspension due to the Detection of Illicit Discharge. Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The Director will notify a violator of the proposed termination of its MS4 access. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the Director.

Section 12.3.8 Requirement to Secure a RIPDES Permit

The Director shall refer to RIDEM all non-storm water discharges not authorized in accordance with Part I.B.3 of the MS4 General Permit or by a specific RIPDES Permit, which the Director has deemed appropriate to continue discharging to the MS4, for consideration of an appropriate permit.

Section 12.3.9 Industrial and Construction Activity Discharge.

Any person subject to an industrial or construction activity RIPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Director prior to the allowing of discharges to the MS4, or as a condition of a subdivision map, site plan, building permit, or development or improvement plan.

Section 12.3.10 Requirement to Prevent, Control and Reduce Storm Water Pollutants by the use of Best Management Practices

Upon confirmation of a violation of this ordinance, the Director may require, in an attempt to prevent, control, and reduce storm water pollutants, any person engaged in activities or operations, or owning facilities or property which has or may result in future pollutants entering storm water, the storm drainage system, or waters of the State shall develop and implement, at their own expense, a Storm Water Pollution Prevention Plan prescribing Best Management Practices to the extent they are technologically achievable to prevent and reduce such pollutants. The owner or operator of a commercial or industrial establishment found to be in violation of this ordinance shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense. The SWMPP shall be subject to review by the Town and/or RIDEM for approval, and the cost of such review shall be at the owner or operator's expense.

Section 12.3.11 Notification of Spills

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in unauthorized discharges or pollutants discharging into storm water, the storm drain system, or waters of the State from said facility, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of a hazardous material said person shall immediately notify emergency response officials of the occurrence via emergency dispatch services (911). In the event of a release of non-hazardous materials, said person shall notify the Director no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the Director within two (2) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial

establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years. Nothing in this section shall preclude any owner/lessee from compliance with relevant provisions of the Rhode Island Clean Water Act, R.I.G.L. § 46-12-1, *et seq.* or other applicable laws or regulations.

Section 12.3.12 Enforcement

Notice of Violation: Whenever the Director finds that any person has violated a prohibition or failed to meet a requirement of this Ordinance, the Director may order compliance by written notice of violation to the land owner and/or responsible person. Such notice may require without limitation:

1. The performance of monitoring, analyses, and reporting;
2. The elimination of illicit connections or discharges;
3. That violating discharges, practices, or operations shall cease and desist;
4. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property; and
5. Payment of a fine to cover administrative and remediation costs; and
6. The implementation of source control or treatment BMPs; and
7. The development and approval of a Storm Water Pollution Prevention Plan

If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

Section 12.3.13 Administrative Orders

The Director is authorized to issue the following administrative orders at any time he/ she deem such action appropriate to secure timely and effective compliance with this Ordinance or a discharge permit or order issued pursuant to this Ordinance, whether or not any previous notifications of violation have been provided to the user.

A. Cease and Desist Order: The Director may issue an order to cease and desist a violation or an action or inaction which threatens a violation and to direct the user to comply forthwith or to take such appropriate remedial or preventive action as may be needed to properly address the violation or threatened violation, including halting operations and terminating the discharge.

B. Consent Order: The Director may enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with a user. Such orders shall include specific actions to be taken by the user and specific time frames to correct a violation or to remove the threat of a violation. A consent order may also direct that a user provide improved operation and maintenance of existing discharge facilities, conduct additional self-monitoring, or submit appropriate reports or management plans.

Section 12.3.14 Abatement by Town

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, than the Town or a contractor designated by the Director shall enter upon the subject private property and is authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the Town or designated contractor to enter upon the premises for the purposes set forth above.

Section 12.3.15 Cost of Abatement of the Violation

Within thirty days after abatement of the violation by or under the direction of the Director, the owner of the property will be notified by the enforcement agency or municipality of the cost of abatement, including administrative costs. If the amount due is not paid within a timely manner as determined by the Director, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. Any person violating any of the provisions of this section shall become liable to the Town by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of 12 percent per annum shall be assessed on the balance beginning on the first day following discovery of the violation.

Section 12.3.16 Injunctive Relief

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. If a person has violated or continues to violate the provisions of this ordinance, the Director may petition for a temporary, preliminary, or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

Section 12.3.17 Violations Deemed a Public Nuisance

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Ordinance is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken by the Town.

Section 12.3.18 Criminal Prosecution

Any person that has violated or continues to violate this Ordinance shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to a criminal penalty of $500 dollars per violation per day and/or imprisonment for a period of time not to exceed five (5) days. The Director may recover all attorney's fees, court costs, and other expenses associated with enforcement of this Ordinance, including sampling and monitoring expenses.

Section 12.3.19 Remedies Not Exclusive

The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable federal, state, or local law and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

SECTION 2. The Town Clerk is hereby authorized to cause said changes to be made to the Town of Scituate's Code of Ordinances.

SECTION 3. This ordinance shall take effect immediately upon passage.

Attested To By:

Margaret M Long

Margaret M. Long, Town Clerk

Passed By Town Council On:

August 10, 2023

Attachment C

Wet Season Outfall Testing Memorandum – April 2023

JOE CASALI ENGINEERING, INC.

CIVIL • SITE DEVELOPMENT • TRANSPORTATION • DRAINAGE • WETLANDS • ISDS •TRAFFIC •FLOODPLAIN

300 Post Road • Warwick, RI 02888 • (401) 944-1300 • (401) 944-1313 (fax) • WWW. JOECASALI.COM

February 16, 2024

Mr. Kirk Loiselle, Director
Town of Scituate Department of Public Works
1 Lincoln Circle
Scituate, RI 02857

RE: High Water Table Illicit Outfall Discharge Evaluation – January to April 2023
RIDEM RIPDES Small MS4 Annual Reporting
RIPDES Permit No. RIR040027

Dear Mr. Loiselle:

Joe Casali Engineering, Inc. (JCE) has completed a "wet season" illicit discharge evaluation in accordance with Rhode Island Pollutant Discharge Elimination System (RIPDES) Small MS4 Permit No. RIR040027, as required by RIDEM. JCE field inspected all outfalls throughout the Town between April 21 and April 28, 2023. JCE observed and documented nine (9) outfalls that were discharging during non-stormwater events. Six (6) outfalls were flowing with no indication of illicit discharges while three (3) outfalls were flowing with potential indicators of illicit connections. Additional details and analysis can be found below.

With respect to process, JCE and a representative from the Town Department of Public Works (DPW) visited each outfall location and performed a visual inspection. Inspections occurred in April 21, 2023 and April 28, 2023 – both dates were at least three (3) days after storm events exceeding one (1) inch. If flow was not present, general reconnaissance was performed on the outfall, and the outfall was GPS located. If flow was observed, additional steps were taken. At each flowing location, the general surrounding area was reviewed to check for obvious indicators of potential illicit discharges. Water samples were obtained from the outfall and were field screened for temperature, pH, salinity, and specific conductivity using an Oakton Multi-Parameter PCSTestr™ Series 35 instrument. Samples were also field screened using WaterWorks Free Chlorine Ultra High II test strips and WaterWorks Nitrates and Nitrites test strips. Additional samples were collected for laboratory analytical testing (New England Testing Laboratory, Inc of West Warwick, RI) including bacteria, ammonia, and surfactants.

Outfall Reconnaissance Inventory / Sample Collection Field Sheets for all outfalls throughout the Town are attached to this letter. Sampling and testing results are summarized below and within the attached summary table. Laboratory testing data sheets are also attached to this letter.

Summary of the Results and Recommendations

Based on the analytical testing and/or visual observations, the following outfalls should have further testing during the dry season to review and determine the source of the non-stormwater discharge or required repairs.

- Outfall #1, 2, 3, 4, 5, 6, 14, and 23 were all observed to be overburdened with vegetation overgrowth surrounding the outfall making inspection difficult, and potentially leading to accelerated deterioration. ***JCE recommends that these outfalls be cleared of all excess***

vegetation to prevent damage to the structure and to limit the potential for restricting flow.

- Outfalls #4, 7, 8, 9, 20 and 24 were all observed to be flowing at the time of observation. Based upon field testing and laboratory testing, there are no indicators that illicit connections are present, and the flow observed is likely groundwater. No additional action beyond routing inspection is warranted at these locations.

- Outfall #5 and 19 exhibited a strong sewage odor and the discharge showed high levels of bacteria (fecal coliform). As this is a residential area, the source of the bacteria may be the result of a failing septic system or animal waste entering the storm drain system. Additionally, low levels of ammonia are present as well. ***JCE recommends further review of this outfall in an attempt to determine the source of discharge. This may include developing mapping and performing a field review of on-site wastewater treatment systems within the contributing watershed area.***

- Outfall #6 exhibited a strong hydrogen sulfide odor (rotten eggs) with cloudy discharge. Although samples were not tested for bacteria and ammonia based on the detectable odors, the discharge should be reviewed for the source. ***JCE recommends further review of this outfall in an attempt to determine the source of discharge. This may include developing mapping and performing a field review of on-site wastewater treatment systems within the contributing watershed area.***

- Outfall #11 was observed to be in very poor condition having collapsed and degraded with sections of concrete pipe having fractured. Outfall #14 and 21 were observed to be partially collapsed. Outfall #12 was observed to have been filled with concrete. Outfall #22, 23, 29 and 30 were observed to be buried or build up with silt and sediment requiring cleaning and flushing. ***JCE recommends these outfalls be repaired / rehabilitated as needed.***

- Outfall #18 was not located in the field by JCE and Scituate Department of Public Works and is assumed to have been removed or eliminated.

Moving forward, we recommend an additional round of outfall inspections and testing during the dry season in 2024 (Summer 2024). We thank you for the opportunity to prepare this report. If you need any clarification or would like to discuss the content of this letter report, please call myself or Joseph A. Casali, PE, MBA at 401-944-1300.

Sincerely,
JOE CASALI ENGINEERING, INC.

Daniel R. DeCesaris, P.E.
Project Manager

Enclosures: Attachment A – Summary Table; Attachment B – Outfall Reconnaissance Inventory/Sample Collection Field Sheets; Attachment C – Laboratory Testing Results

<u>**Attachment A**</u>

Summary Table

Name of Town: Scituate

General Information				Location in Decimal Degrees					Receiving Water Body Information		Outfall Information							
Inspector(s	Outfall ID	Date	Time	Northing	Easting	Method of Collection	Accuracy in meters	Horizontal Datum	Type	Name	Material	If Other	Shape	If Other	Diameter	If Other	Type	If Other
MG	1	4/21/2023	10:46	237198.551	314640.759	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	2	4/21/2023	10:41	237231.4549	314565.1066	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	3	4/21/2023	10:30	237292.3664	314390.122	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	4	4/21/2023	10:14	237323.188	314214.0222	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		CIRCULAR		12"-35"		SINGLE	
MG	5	4/21/2023	9:36	237338.9091	314146.2905	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		CIRCULAR		12"-35"		SINGLE	
MG	6	4/21/2023	10:58	237240.493	313849.9845	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	OTHER		CIRCULAR		6"-11"		SINGLE	
MG	7	4/21/2023	8:47	237525.7129	312843.5803	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		CIRCULAR		12"-35"		SINGLE	
MG	8	4/21/2023	8:08	237576.0435	312476.9496	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		CIRCULAR		12"-35"		SINGLE	
MG	9	4/21/2023	8:26	237581.0871	312483.8352	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		CIRCULAR		36"-59"		SINGLE	
MG	10	4/21/2023	8:32	237575.3484	312498.1847	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		CIRCULAR		12"-35"		SINGLE	
MG	11	4/21/2023	12:48	237424.876	312029.751	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	RCP		OTHER				SINGLE	Collapsed; remnant pipe.
MG	12	4/21/2023	9:20	237180.909	313667.26	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	13	4/21/2023	9:07	237083.703	313703.584	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	STEEL		CIRCULAR		6"-11"		SINGLE	
MG	14	4/21/2023	9:26	235996.9231	314215.7272	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	15	4/21/2023	13:03	235711.3515	310678.947	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Pawtuxet River	OTHER		CIRCULAR		12"-35"		SINGLE	
MG	16	4/21/2023	13:21	238788.5077	304773.1934	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Colvin Brook	RCP		CIRCULAR		12"-35"		SINGLE	
MG	17	4/21/2023	14:16	241199.6734	306847.1254	GPS ROVER Carlson BRX-7	<1cm	NAVD88		North Branch Pawtuxet River	STEEL		CIRCULAR		6"-11"		SINGLE	
MG	18	4/21/2023	11:37	Not Located	Not Located													
MG	19	4/21/2023	13:38	264610.3988	332255.1927	GPS ROVER Carlson BRX-7	<1cm	NAVD88		North Branch Pawtuxet River	RCP		BOX		12"-35"		SINGLE	
MG	20	4/21/2023	9:08	248488.2925	309113.2658	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Furnace Hill Brook	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	21	4/21/2023	12:15	238666.7836	314199.6895	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Cranberry Brook	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	22	4/21/2023	12:11	238682.306	314111.7814	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Cranberry Brook	RCP		CIRCULAR		12"-35"		SINGLE	
MG	23	4/28/2023	8:26	251913.811	309923.2704	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Scituate Reservoir	OTHER		CIRCULAR		12"-35"		SINGLE	
MG	24	4/28/2023	8:26	246816.7046	312626.1395	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Cranberry Brook	RCP		CIRCULAR		36"-59"		SINGLE	
MG	25	4/28/2023	10:53	279405.1506	306805.9815	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Moswansicut Pond	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	26	4/28/2023	10:48	278886.8671	306558.0896	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Moswansicut Pond	RCP		CIRCULAR		6"-11"		SINGLE	
MG	27	4/28/2023	11:08	281588.6462	307896.8105	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Moswansicut Pond	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	28	4/28/2023	10:10	279286.1146	305052.4304	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Moswansicut Pond	STEEL		CIRCULAR		12"-35"		SINGLE	
MG	29	4/28/2023	9:55	276857.2973	304732.7501	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Moswansicut Pond	RCP		CIRCULAR		12"-35"		SINGLE	
MG	30	4/28/2023	9:46	273506.631	303593.1309	GPS ROVER Carlson BRX-7	<1cm	NAVD88		Scituate Reservoir								

Name of Town: Scituate

Outfall Inspection - Jan 1-April 30				Illicit Discharge Flow Measurement				Visual Observation											Field Analysis											
Outfall ID	Date of Inspection	Time	Inspector(s)	Flow Type	Width of Water Surface(feet)	Approx Depth of Water (feet)	Approx Flow Rate (GPM)	Immediate Surrounding Land Use	If Other	Odor	If Other	Color	If Other	Floatables	If Other	Staining	If Other	Clarity	Vegetation/ Algae Growth	Sedimentation	Scouring	Date Sampled	Water Temp.	Units	pH	Conductivity	Bacteria	Units	Ammonia	Units	Surfactants (MBAS)	Units
4	4/21/2023	10:14	MG (JCE)	TRICKLE	0.25	0.01		RESIDENTIAL		NONE		NONE		NONE		NONE		CLEAR	EXCESSIVE	NO	NO		51.26	F	6.66	196.2						
5	4/21/2023	9:36	MG (JCE)	MODERATE	0.83	0.125		RESIDENTIAL		SEWAGE		NONE		NONE		NONE		CLEAR	EXCESSIVE	NO	NO	4/21/2023	53.24	F	8.01	210	670	MPN/100ml	1.1	mg/l	ND	mg/l
6	4/21/2023	10:58	MG (JCE)	MODERATE	0.41	0.041		RESIDENTIAL		ROTTEN EGGS		NONE	Cloudy	NONE		NONE		CLEAR	NONE	NO	NO		54.14	F	6.5	284						
7	4/21/2023	8:47	MG (JCE)	MODERATE	0.66	0.02		RESIDENTIAL		NONE		NONE		NONE		NONE		CLEAR	NONE	NO	NO		51.26	F	8.3	143.5						
8	4/21/2023	8:08	MG (JCE)	TRICKLE	1.25	0.16		RESIDENTIAL		NONE		NONE		NONE		NONE		CLEAR	NONE	NO	NO		49.28	F	9.34	108.2						
9	4/21/2023	8:26	MG (JCE)	MODERATE	3.83	0.66		RESIDENTIAL		NONE		NONE		NONE		NONE		CLEAR	NONE	NO	NO		49.46	F	9.2	106.5						
19	4/21/2023	13:38	MG (JCE)	MODERATE	2	0.5		RESIDENTIAL		SEWAGE		BROWN	Cloudy	NONE		NONE		CLEAR	EXCESSIVE	NO	NO	4/21/2023	60	F	6.08	104.7	<10	MPN/100ml	0.2	mg/l	ND	mg/l
20	4/21/2023	9:08	MG (JCE)	MODERATE	0.83	0.25		RESIDENTIAL		NONE		NONE		NONE		NONE		CLEAR	EXCESSIVE	NO	NO		51.98	F	7.67	263						
24	4/21/2023	8:26	MG (JCE)	TRICKLE	2.75	1		RESIDENTIAL		NONE		NONE		NONE		NONE		CLEAR	NONE	NO	NO		50	F	7.91	190.3						

Note: Flow rates based on instanteous measurements of specific volumes per unit time.

Attachment B

Outfall Reconnaissance Inventory/Sample Collection Field Sheets

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #1	
Today's date: 4/21/2023		Time (Military): 10:46	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 53º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237198.551	Easting: 314640.759	GPS Unit: Carlson GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
	Flow depth		In	Tape measure
	Flow width	_____' _____"	Ft, In	Tape measure
	Measured length	_____' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Probe
TDS			ppm	Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	Silt, sediment, and rock covering the outfall pipe.
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation clearing recommended

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #2	
Today's date: 4/21/2023		Time (Military): 10:41	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 53º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237231.4549	Easting: 314565.1066	GPS Unit: Carlson GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 14-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
	Flow depth		In	Tape measure
	Flow width	_____' _____"	Ft, In	Tape measure
	Measured length	_____' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Probe
TDS			ppm	Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☒	☐ Oily ☒ Flow Line ☐ Paint ☐ Other:	Silt, sediment observed approximately ½- Inch up the pipe.
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation and sediment clearing recommended.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #3	
Today's date: 4/21/2023		Time (Military): 10:30	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 51°	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237292.3664	Easting: 314390.1220	GPS Unit: Carlson GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
	Flow depth		In	Tape measure
	Flow width	_____' _____"	Ft, In	Tape measure
	Measured length	_____' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation clearing recommended.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #4	
Today's date: 4/21/2023		Time (Military): 1014	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 53º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237323.1880	Easting: 314214.0222	GPS Unit: Carlson GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☒ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	196.2	S/M	Probe
	Salinity	90.4	ECw	Probe
	Flow depth	1/8"	In	Tape measure
	Flow width	0' 3"	Ft, In	Tape measure
	Nitrates	0		Test Strip
	Nitrites	0		Test Strip
Temperature		51.26 º F	°F	Thermometer
pH		6.66	pH Units	Test strip/Probe
TDS		139		Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☒	☒ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☒ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation clearing recommended. Flow likely groundwater

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #5	
Today's date: 4/21/2023		Time (Military): 0936	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 49º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237338.9091	Easting: 314146.2905	GPS Unit: Carlson GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 30-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	210	S/M	Probe
	Salinity	96.0	ECw	Probe
	Flow depth	1 1/2"	In	Tape measure
	Flow width	0' 10"	Ft, In	Tape measure
	Nitrates	5		Test Strip
	Nitrites	.5		Test Strip
Temperature		53.24º F	°F	Thermometer
pH		8.01	pH Units	Test strip/Probe
TDS		148		Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☒	☒ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☒ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☒	☒ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☒ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☒ Yes	☐ No	
2.	If yes, collected from:	☒ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☒ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation clearing recommended. Further analysis of potential illicit connections recommended.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #6	
Today's date: 4/21/2023		Time (Military): 1058	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 55º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237240.4930	Easting: 313849.9845	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: VCP	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 10-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	284	S/M	Probe
	Salinity	132	ECw	Probe
	Flow depth	1/2"	In	Tape measure
	Flow width	0' 5"	Ft, In	Tape measure
	Nitrates	5		Test Strip
	Nitrites	1		Test Strip
Temperature		54.14º F	°F	Thermometer
pH		6.5	pH Units	Test strip/Probe
TDS		202		Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☒	☐ Sewage ☒ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☒ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☒	☒ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☒ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☒	See severity	☒ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☒ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	Slight Cracking
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☐ Excessive ☒ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☒ Yes	☐ No	
2.	If yes, collected from:	☒ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☒ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation clearing recommended. Further analysis of potential illicit connections recommended.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #7	
Today's date: 4/21/2023		Time (Military): 0847	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 55º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237525.7129	Easting: 312843.5803	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other:_____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 24-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity	143.5	S/M	Probe
	Salinity	65.8	ECw	Probe
	Flow depth	¼ "	In	Tape measure
	Flow width	0' 8"	Ft, In	Tape measure
	Nitrates	0		Test Strip
	Nitrites	0		Test Strip
Temperature		51.26º F	°F	Thermometer
pH		8.3	pH Units	Test strip/Probe
TDS		102		Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Flow likely groundwater.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #8	
Today's date: 4/21/2023		Time (Military): 0808	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 47º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237576.0435	Easting: 312476.9496	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other:_____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 24-Inch	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☒ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	108.2	S/M	Probe
	Salinity	65.8	ECw	Probe
	Flow depth	2 "	In	Tape measure
	Flow width	0' 15"	Ft, In	Tape measure
	Nitrates	0		Test Strip
	Nitrites	0		Test Strip
Temperature		49.28º F	°F	Thermometer
pH		9.34	pH Units	Test strip/Probe
TDS		123		Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Flow likely groundwater

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #9	
Today's date: 4/21/2023		Time (Military): 0826	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 47º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237581.0871	Easting: 312483.8352	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other:_____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 54-Inch	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	106.5	S/M	Probe
	Salinity	71.3	ECw	Probe
	Flow depth	8 "	In	Tape measure
	Flow width	0' 46"	Ft, In	Tape measure
	Nitrates	0		Test Strip
	Nitrites	0		Test Strip
Temperature		49.46º F	°F	Thermometer
pH		9.2	pH Units	Test strip/Probe
TDS		121		Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Flow likely groundwater.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #10	
Today's date: 4/21/2023		Time (Military): 0832	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 47º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237575.3484	Easting: 312498.1847	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: Village Overlay
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12-Inch	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #11	
Today's date: 4/21/2023		Time (Military): 1248	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 57º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237424.876	Easting: 312029.751	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: Village Overlay
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: Collapsed pipe, only remnants of the pipe were observed.	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☒ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	Collapsed pipe, remnants of the RCP pipe were observed
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☒ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Structure is in a state of disrepair: may have been disconnected from the upgradient system. Further analysis and evaluation recommended.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #12	
Today's date: 4/21/2023		Time (Military): 0920	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 49º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237180.909	Easting: 313667.260	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 14"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☒ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	Outfall was sealed with concrete and not functioning.
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☒ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Structure filled/sealed with concrete; may be disconnected from the upgradient system. Further investigation is required.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #13	
Today's date: 4/21/2023		Time (Military): 0907	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 48º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 237083.703	Easting: 313703.584	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 8"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #14	
Today's date: 4/21/2023		Time (Military): 0926	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 52º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 235996.9231	Easting: 314215.7272	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☒ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☒ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	Slight pipe cracking
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	Excessive vegetation in front of the outfall
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Vegetation clearing recommended. Monitor structure for further cracking/degradation.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Pawtuxet River		Outfall ID: Outfall #15	
Today's date: 4/21/2023		Time (Military): 1303	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 58º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 235711.3515	Easting: 310678.9470	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☒ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 18"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☒ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Colvin Brook		Outfall ID: Outfall #16	
Today's date: 4/21/2023		Time (Military): 1321	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 59º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 238788.5077	Easting: 304773.1934	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: North Branch Pawtuxet River		Outfall ID: Outfall #17	
Today's date: 4/21/2023		Time (Military): 1416	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 59º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 241199.6734	Easting: 306847.1254	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 6"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☒	☐ Oily ☒ Flow Line ☐ Paint ☐ Other:	Silt, sediment, and vegetation visible in front of the pipe.
Abnormal Vegetation	☐	☒ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: North Branch Pawtuxet River		Outfall ID: Outfall #19	
Today's date: 4/21/2023		Time (Military): 1338	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 58º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 264610.3988	Easting: 332255.1927	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 24" - Wide 12" - Deep	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☒ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	104.7	S/M	Probe
	Salinity	51.4	ECw	Probe
	Flow depth	6"	In	Tape measure
	Flow width	24"	Ft, In	Tape measure
	Nitrates	0		Test Strip
	Nitrites	.15		Test Strip
Temperature		60º	°F	Thermometer
pH		6.08	pH Units	Test strip/Probe
TDS		75		Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☒ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☒	☒ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☒ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☒	☐ Clear ☒ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☒ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☒	See severity	☐ 1 – Slight cloudiness	☒ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☒	☐ Oily ☒ Flow Line ☐ Paint ☐ Other:	Silt, sediment, and vegetation visible in front of the pipe
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☒ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☒ Yes	☐ No	
2.	If yes, collected from:	☒ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Further analysis of potential illicit connections recommended.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Furnace Hill Brook		Outfall ID: Outfall #20	
Today's date: 4/21/2023		Time (Military): 0908	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 49º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 248488.2925	Easting: 309113.2658	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 24"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	263	S/M	Probe
	Salinity	120	ECw	Probe
	Flow depth	3"	In	Tape measure
	Flow width	10"	Ft, In	Tape measure
	Nitrates	2		Test Strip
	Nitrites	.3		Test Strip
Temperature		51.98º F	°F	Thermometer
pH		7.67	pH Units	Test strip/Probe
TDS		186		Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	Moss on the bottom of the pipe.
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Cranberry Brook		Outfall ID: Outfall #21	
Today's date: 4/21/2023		Time (Military): 1215	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 57º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 238666.7836	Easting: 314199.6895	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☒ Spalling, Cracking or Chipping ☐ Peeling Paint ☒ Corrosion	Collapsed on the right side of the pipe.
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	Silt, sediment, and vegetation visible in front of the pipe.
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☒ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Recommend further analysis for repair/replacement.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Cranberry Brook		Outfall ID: Outfall #22	
Today's date: 4/21/2023		Time (Military): 1211	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 57º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 238682.3060	Easting: 314111.7814	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	Pipe found approximately 14" underground after digging with a shovel.
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☐ Unlikely ☒ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Outfall was buried; maybe disconnected from upgradient structures. Recommend further analysis.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Scituate Reservoir Watershed		Outfall ID: Outfall #23	
Today's date: 4/28/2023		Time (Military): 0826	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 50º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 251913.8110	Easting: 309923.2704	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☒ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	Slight damming in front of the outfall.
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Recommend clean and flush; remove built up materials from in front of the outfall.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Cranberry Brook		Outfall ID: Outfall #24	
Today's date: 4/28/2023		Time (Military): 0826	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 47º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 246816.7046	Easting: 312616.1395	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 36"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☒ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☒Flow #1	Electric Conductivity	190.3	S/M	Probe
	Salinity	86.4	ECw	Probe
	Flow depth	12"	In	Tape measure
	Flow width	33"	Ft, In	Tape measure
	Nitrates	0		Test Strip
	Nitrites	0		Test Strip
Temperature		50º F	°F	Thermometer
pH		7.91	pH Units	Test strip/Probe
TDS		134		Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Flow likely groundwater.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Moswansicut Pond		Outfall ID: Outfall #25	
Today's date: 4/28/2023		Time (Military): 1053	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 56º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 279405.1506	Easting: 306805.9815	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	Slight silt and sediment buildup
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Moswansicut Pond		Outfall ID: Outfall #26	
Today's date: 4/28/2023		Time (Military): 1048	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 56º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 278886.8671	Easting: 306558.0896	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 10"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes	☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Moswansicut River		Outfall ID: Outfall #27	
Today's date: 4/28/2023		Time (Military): 1108	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 56º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 281588.6462	Easting: 307896.8105	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	The bottom of the steel pipe was rotted out.
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Moswansicut Pond		Outfall ID: Outfall #28	
Today's date: 4/28/2023		Time (Military): 1010	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 56º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 279286.1146	Easting: 305052.4304	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☒	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	The steel pipe was still functioning but rotted out.
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	Heavy amounts of growth In front of the pipe.
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Moswansicut Pond		Outfall ID: Outfall #29	
Today's date: 4/28/2023		Time (Military): 0955	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 51°	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 276857.2973	Easting: 304732.7501	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No *If No, Skip to Section 5*				
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☒	☐ Oily ☒ Flow Line ☐ Paint ☐ Other:	Major silt 5” deep in pipe.
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	None
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No
2.	If yes, collected from:	☐ Flow	☐ Pool
3.	Intermittent flow trap set?	☐ Yes ☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Recommend clean and flush.

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: Scituate Reservoir		Outfall ID: Outfall #30	
Today's date: 4/28/2023		Time (Military): 0946	
Investigators: Mark Gelsomino & Russel Yeaw		Form completed by: Mark Gelsomino	
Temperature (°F): 52º	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Northing: 273506.6310	Easting: 303593.1309	GPS Unit: GPSRover BRX7	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Ultra-Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: Pipe was unable to be observed. Covered in ripr rap hay and sticks.	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Electric Conductivity		S/M	Probe
	Salinity		ECw	Probe
☐Flow #2	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
	Nitrates			Test Strip
	Nitrites			Test Strip
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
TDS				Probe

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	None
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	None
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	Could not get to the pipe, overgrown vegetation as well as rip rap and hay covering the outfall.
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	None
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	None

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☒ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Recommend removal of rip rap and hay; re-inspect.

Attachment C

Laboratory Test Results

New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 3D21047
Client Project: Scituate MS4

Report Date: 28-April-2023

Prepared for:

Daniel DeCesaris
Joe Casali Engineering, Inc.
300 Post Road
Warwick, RI NA

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted:

The samples listed below were submitted to New England Testing Laboratory on 04/21/23. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 3D21047. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled
3D21047-01	5a	Water	04/21/2023
3D21047-02	5b	Water	04/21/2023
3D21047-03	6	Water	04/21/2023
3D21047-04	19a	Water	04/21/2023
3D21047-05	19b	Water	04/21/2023
3D21047-06	19c	Water	04/21/2023

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

19a

Surfactants (MBAS)	SM5540-C (11)

19b

Ammonia	SM4500-NH3-D (11)

19c

Fecal Coliform 18 Hr.	Colilert-18

5a

Fecal Coliform 18 Hr.	Colilert-18

5b

Ammonia	SM4500-NH3-D (11)

6

Surfactants (MBAS)	SM5540-C (11)

The analytical methods provided are documented in the following references:

Manual of Methods for Chemical Analysis of Water and Water Wastes, EPA-600/4-79-020 (Revised 1983), USEPA/EMSL.
Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, APHA, AWWA-WPCF.
40 CFR 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*, Office of Federal Register National Archives and Records Administration.

Results:

Sample: 5a
3D21047-01 (Water)

Microbiology

	Result	Reporting Limit	Units	Date Analyzed
Fecal coliform bacteria	**670**	10	MPN/100ml	04/21/23 16:30

Sample: 5b
3D21047-02 (Water)

General Chemistry

	Result	Reporting Limit	Units	Date Analyzed
Ammonia	**1.1**	0.1	mg/L	04/26/23

Sample: 6
3D21047-03 (Water)

General Chemistry

	Result	Reporting Limit	Units	Date Analyzed
MBAS	ND	0.09	mg/L	04/22/23 10:00

Sample: 19a
3D21047-04 (Water)

General Chemistry

	Result	Reporting Limit	Units	Date Analyzed
MBAS	ND	0.09	mg/L	04/22/23 10:00

Sample: 19b
3D21047-05 (Water)

General Chemistry

	Result	Reporting Limit	Units	Date Analyzed
Ammonia	**0.2**	0.1	mg/L	04/26/23

Sample: 19b (Continued)
3D21047-05 (Water)

Sample: 19c
3D21047-06 (Water)

Microbiology

	Result	Reporting Limit	Units	Date Analyzed
Fecal coliform bacteria	<	10	MPN/100ml	04/21/23 16:30

Case Narrative

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

All samples were analyzed in accordance with 40 CFR 136 approved methodologies when applicable.

NEW ENGLAND TESTING LABORATORY, INC.
1254 Douglas Avenue
North Providence, RI 02904
1-888-863-8522

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CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME/LOCATION: Scituate MS4

CLIENT: Joe Casali Engineering

REPORT TO:

INVOICE TO:

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** Fecal	Ammonia	MBAS				REMARKS
4/21	9:51		X	5A	X					X						
4/21	9:55		X	5B	X						X					
4/21	11:08		X	6	X							X				
4/21	1:43		X	19A	X							X				
4/21	1:44		X	19B	X						X					
4/21	1:45		X	19C	X					X						

Sampled by: (Signature)	Date/Time 4/21 3:18	Received by: (Signature)	Date/Time	Laboratory Remarks: Temp. received: 4 Cooled ☐
Relinquished by: (Signature)	Date/Time 4/21 3:18	Received by: (Signature)	Date/Time	Special Instructions: List Specific Detection Limit Requirements:
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time 4/21 1518	Turnaround (Business Days)_____

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates

New England Testing Laboratory, Inc.
(401) 353-3420

REPORT OF ANALYTICAL RESULTS

NETLAB Work Order Number: 3D28026
Client Project: Scituate MS4

Report Date: 05-May-2023

Prepared for:

Daniel DeCesaris
Joe Casali Engineering, Inc.
300 Post Road
Warwick, RI NA

Richard Warila, Laboratory Director
New England Testing Laboratory, Inc.
59 Greenhill Street
West Warwick, RI 02893
rich.warila@newenglandtesting.com

Samples Submitted:

The samples listed below were submitted to New England Testing Laboratory on 04/28/23. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is 3D28026. Custody records are included in this report.

Lab ID	Sample	Matrix	Date Sampled
3D28026-01	BIRCH LANE #2	Water	04/28/2023
3D28026-02	BIRCH LANE #3	Water	04/28/2023
3D28026-03	BIRCH LANE #1	Water	04/28/2023

Request for Analysis

At the client's request, the analyses presented in the following table were performed on the samples submitted.

BIRCH LANE #1

Surfactants (MBAS)	SM5540-C (11)

BIRCH LANE #2

Ammonia	SM4500-NH3-D (11)

BIRCH LANE #3

Fecal Coliform 18 Hr.	Colilert-18

The analytical methods provided are documented in the following references:

Manual of Methods for Chemical Analysis of Water and Water Wastes, EPA-600/4-79-020 (Revised 1983), USEPA/EMSL.
Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, APHA, AWWA-WPCF.
40 CFR 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*, Office of Federal Register National Archives and Records Administration.

Results:

Sample: BIRCH LANE #2
3D28026-01 (Water)

General Chemistry

	Result	Reporting Limit	Units	Date Analyzed
Ammonia	**0.4**	0.1	mg/L	05/01/23

Sample: BIRCH LANE #3
3D28026-02 (Water)

Microbiology

	Result	Reporting Limit	Units	Date Analyzed
Fecal coliform bacteria	**45**	1	MPN/100ml	04/28/23 16:50

Sample: BIRCH LANE #1
3D28026-03 (Water)

General Chemistry

	Result	Reporting Limit	Units	Date Analyzed
MBAS	**0.26**	0.03	mg/L	04/29/23 10:55

Case Narrative

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

All samples were analyzed in accordance with 40 CFR 136 approved methodologies when applicable.

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street
West Warwick, RI 02893
1-888-863-8522

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CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME/LOCATION: Scituate MS4

CLIENT: Joe Casali Engineering

REPORT TO: Mark@JoeCasali.com

INVOICE TO:

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** Fecal	Ammonia	MBAS	REMARKS
4/28	10:30		X	Birch Lane #2				6			X		
4/28	10:30		X	Birch Lane #3				6		X			
4/28	10:30		X	Birch Lane #1				6				X	

	Date/Time		Date/Time	
Sampled by: (Signature)	4/28 10:30	Received by: (Signature)		Laboratory Remarks: Temp. received: 5 Cooled ☐
Relinquished by: (Signature)		Received by: (Signature)		Special Instructions: List Specific Detection Limit Requirements:
Relinquished by: (Signature)	4/28 1:50	Received for Laboratory by: (Signature)	4/28/23 1350	Turnaround (Business Days)_____

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates