



RIPDES Small MS4 Annual Report - 2017

Town of Tiverton, Rhode Island



PREPARED FOR
Town of Tiverton
Department of Public Works
50 Industrial Way
Tiverton, Rhode Island 02878-3128

PREPARED BY
ESS Group, Inc.
10 Hemingway Drive, 2nd Floor
East Providence, Rhode Island 02915



Project No. T298-012
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DEM USE ONLY	
Date Received	_____

RIPDES SMALL MS4 ANNUAL REPORT GENERAL INFORMATION PAGE

RIPDES PERMIT #RIR040 039

REPORTING PERIOD: YEAR 14
Jan 2017-Dec 2017

OPERATOR OF MS4

Name: Town of Tiverton			
Mailing Address: DEPARTMENT OF PUBLIC WORKS, 50 INDUSTRIAL WAY			
City: TIVERTON	State: RI	Zip: 02878-3128	Phone: (401)625-6760
Contact Person: WILLIAM M. ANDERSON, P.E.		Title: DIRECTOR, DEPARTMENT OF PUBLIC WORKS	
		Email: dpw@tiverton.ri.gov	
Legal status (circle one): PRI - Private <u>PUB - Public</u> BPP - Public/Private STA - State FED - Federal			
Other (please specify):			

OWNER OF MS4 (if different from OPERATOR)

Name: SAME AS OPERATOR			
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 WILLIAM M. ANDERSON, P.E.
 Print Title Director of Public Works
 Signature *William Anderson* Town Administrator Date 6/13/18



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: WILLIAM M. ANDERSON, P.E.

Phone: (401) 625-6760 Email: dpw@tiverton.ri.gov

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 residents of Tiverton have been educated on stormwater pollution prevention for the past fourteen years. Elements of public education include the following ongoing activities:
1) The Department of Public Works (DPW) provides copies of RIDEM's pamphlet "10 Things You Can Do To Improve Water Quality in Rhode Island." Hard copies are available at the Tiverton Town Hall.
2) The Department of Public Works (DPW) provides copies of a stormwater brochure designed to reduce stormwater pollution from priority watersheds designated in the 2010 Mt. Hope Bay/Upper Kickemuit River Estuary TMDL for Fecal Coliform. Hard copies are available at the Tiverton Town Hall and electronically through the DPW.
3) The Town's Conservation Commission has been involved with issues regarding protection of the Town's surface and ground waters, particularly with leadership initiatives to protect the Stafford Pond area.
4) The Town's Conservation Commission also works directly with the schools to educate fourth graders on the basics of stormwater issues
5) The Town's Stormwater Management Plan (SWMP) and annual reports have been publicly noticed.
6) The Tiverton Wastewater District (TWWD) provides online resources for on-site wastewater management (see http://twwd.org/customer-resources/).

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.

Town residents have been involved in various aspects of stormwater pollution prevention. Residents are working alongside members of the DPW in the following Town committees:
- Conservation Commission - conducts a stormwater educational session with fourth grade students in town
- Fogland Beach Oversight Committee - oversees activities to minimize erosion surrounding the Fogland Beach area

PUBLIC EDUCATION AND OUTREACH cont'd

Check all topics that were included in the Public Education and Outreach program during this reporting period. For each of the topics selected, provide the target pollutant (e.g. construction sites, total suspended solids):

Topic	Target Pollutant(s)
<input checked="" type="checkbox"/> Construction Sites	TSS
<input type="checkbox"/> Pesticide and Fertilizer Application	
<input checked="" type="checkbox"/> General Stormwater Management Information	General
<input type="checkbox"/> Pet Waste Management	
<input checked="" type="checkbox"/> Household Hazardous Waste Disposal	Hazardous wastes
<input checked="" type="checkbox"/> Recycling	Floatables, metals
<input type="checkbox"/> Illicit Discharge Detection and Elimination	
<input type="checkbox"/> Riparian Corridor Protection/Restoration	
<input type="checkbox"/> Infrastructure Maintenance	
<input checked="" type="checkbox"/> Trash Management	Floatables
<input type="checkbox"/> Smart Growth	
<input type="checkbox"/> Vehicle Washing	
<input type="checkbox"/> Storm Drain Marking	
<input type="checkbox"/> Water Conservation	
<input type="checkbox"/> Green Infrastructure/Better Site Design/LID	
<input type="checkbox"/> Wetland Protection	
<input type="checkbox"/> Other:	
<input type="checkbox"/> None	

Specific audiences targeted during this reporting period:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Public Employees | <input checked="" type="checkbox"/> Contractors |
| <input checked="" type="checkbox"/> Residential | <input type="checkbox"/> Developers |
| <input type="checkbox"/> Businesses | <input checked="" type="checkbox"/> General Public |
| <input type="checkbox"/> Restaurants | <input type="checkbox"/> Industries |
| <input type="checkbox"/> Other: | <input type="checkbox"/> Agricultural |

Additional Measurable Goals and Activities

Please list all stormwater training attended by your staff during the 2017 calendar year and list the name(s) and municipal position of all staff who attended the training.

Trainings:

No external stormwater trainings were attended by municipal staff during the 2017 calendar year.

Attending name of staff and title: N/A

Attending name of staff and title: _____



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: WILLIAM M. ANDERSON, P.E.

Phone: (401) 625-6760

Email: dpw@tiverton.ri.gov

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.

- Director of Public Works William Anderson presented the Reporting Year 2016 MS4 Annual Report on March 27, 2017 during the Town Council meeting. Stormwater initiatives undertaken in 2016 and planned for 2017 were presented to the Town Council and public, and the public was invited to submit questions or comments. This initiative is the responsibility of the Director of Public Works.
The Town's Conservation Commission works alongside several other committees, boards, the DPW, and town residents on the Fogland Beach Oversight Committee, dealing with issues such as sediment and erosion control.
The Tiverton Conservation Commission conducts a stormwater educational session with fourth grade students in town. Educating students at an early age helps to establish early awareness of stormwater issues.
The removal of cesspools and the subsequent installation of a properly designed and operating OWTS or sanitary sewer will help decrease the pollutant load to the Town's MS4 system, as failed OWTSs and cesspools contaminate groundwater which discharges to the Town's MS4 system. Public education on this matter is the responsibility of the Town and implemented with the assistance of the TWWD.

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
N/A

SECTION II. Public Notice Information (Parts IV.G.2.h and IV.G.2.i)

Was the availability of this Annual Report and the Stormwater Management Program Plan (SWMPP) announced via public notice? [X] YES [] NO

If YES, Date of Public Notice: June 7, 2018

PUBLIC INVOLVEMENT/PARTICIPATION cont'd

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: www.tiverton.ri.gov

Was public meeting held? YES NO

Date: June 11, 2018

Where: Tiverton Town Hall

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: WILLIAM M. ANDERSON, P.E.

Phone: (401) 625-6760 **Email:** dpw@tiverton.ri.gov

IV.B.3.b.1:	<p>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.)</p> <p>Number of Outfalls Mapped within regulated area: <u>108</u></p> <p>Percent Complete: <u>100</u></p> <p>If 100% Complete, Provide Date of Completion: <u>March 2012</u></p>
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The original outfall map was completed and submitted to RIDEM in 2007. The outfall map was updated with additional information requested by RIDEM and submitted in March 2009. A subsequent revision was submitted to RIDEM in March 2012.

IV.B.3.b.2	<p>Indicate if your municipality chose to implement the tagging of outfalls activity under the IDDE minimum measure, activities and actions undertaken under the 2017 calendar year.</p>
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The Town DPW has identified all stormwater outfalls with GPS coordinates and photographs. This data is available in the DPW stormwater outfall database and was last updated as part of the dry weather outfall survey and sampling in 2011. Each outfall has been sequentially numbered. Since the outfalls have been identified, tagging is not required.

IV.B.3.b.3	<p>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.</p>
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ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd

The DPW maintains an inventory of catch basins located on the roads in town. Records of new pipe tie-ins to catch basins are maintained by the DPW through the municipal permitting process for new discharges to the MS4. Additional stormwater system elements are added to the inventory as a result of new MS4 construction projects, IDDE investigations, and TMDL-related surveys.

The catch basin inventory has had a positive effect on minimizing water quality impacts because it improves the ability of the DPW to locate each catch basin for annual monitoring and maintenance.

New forms are being used by inspectors.

See Part IV.G.2.d under "Total Maximum Daily Load (TMDL) or other Water Quality Determination Requirements" for more information regarding TMDL-related actions.

IV.B.3.b.4	<p>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.</p> <p>Date of Adoption: <u>May 13, 1996; amended March 26, 2007, January 14, 2011, and November 1, 2011</u></p> <p>If the Ordinance was amended in 2017, please indicate why changes were necessary.</p>
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The Town's Sewers and Sewage Disposal ordinance was adopted on May 13, 1996, revised on March 26, 2007, and revised again on November 1, 2011. The Ordinance is available as "Appendix C, Article VIII, Section 18-54" in the Town's Code of Ordinances and is available online on the Town Website and at www.municode.com.

On January 24, 2011, the Tiverton Town Council passed a resolution to add Chapter 68 (Illicit Discharge Detection and Elimination) to the Town Code for Stormwater Phase II compliance.

No amendments were made to this ordinance in 2017.

IV.B.3.b.5.ii, iii, iv, & v	<p>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.</p>
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The Tiverton Department of Public Works is responsible for illicit discharge detection and elimination. Storm drain outfalls are inspected regularly by DPW personnel. The DPW investigates illicit discharge complaints and notifies the resident of required action in writing. Unresolved complaints are referred to the RIDEM Office of Compliance and Inspection.

IV.B.3.b.5.vi	<p>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.</p> <p>Number of Catch Basins and Manholes Inspected for illicit connections/IDDE: <u>1065</u></p> <p>Percent Complete: <u>100</u> %</p> <p>Date of Completion: <u>10/18/17</u></p>
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The DPW Director is responsible for implementing an annual catch basin inspection on 1065 catch basins. Catch basins are typically inspected twice per year, once as part of annual operation and maintenance inspections and once as part of the mosquito abatement program. If any catch basin shows evidence of illicit discharge, the matter is investigated by the Tiverton DPW. Once the source of the illicit discharge is found, the DPW notifies the resident of required action in writing.

ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd

IV.B.3.b.5.vii	<p>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 must 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 sample 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.</p> <p>Number of Outfalls Surveyed Jan-Apr: <u>103</u> Number of Outfalls Surveyed Jul-Oct: <u>108</u> Percent Complete: <u>100</u> % Date of Completion: <u>November 4, 2011</u></p>
<p>Dry weather sampling during the high water table timeframe was performed by the DPW and consultant BETA Group in 2007 and previously submitted to RIDEM. Dry weather survey and sampling was conducted by the DPW and consultant ESS Group, Inc. during the low water table timeframe in 2011. Results of the 2011 outfall survey were previously submitted to RIDEM.</p> <p>Over the course of the outfall surveys, it was recognized that a number of the outfalls originally identified by the Town were either state-owned (RIDOT) or represented culverts/other structures that do not discharge stormwater to surface waters. However, for consistency under the existing permit, these structures are still included in the total reported number of outfalls, as they were each evaluated during the surveys.</p>	
IV.B.3.b.7	<p>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.</p>
<p>The Town has attempted to coordinate with RIDOT on design of stormwater improvements for some state roads with interconnections to the MS4.</p>	
IV.B.3.b.8	<p>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.</p>
<p>The operator is not aware of unauthorized non-stormwater discharges to the MS4 that have been deemed appropriate to continue discharging.</p>	
IV.B.3.b.9	<p>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.</p>
<p>The most significant contribution of illicit discharges of pollutants to the Town's MS4 continues to be failed OWTs. Illegal cesspools have become less of a problem over time, as some are converted to upgraded septic systems. Sewering is expected to further reduce the contribution of pollutants to the Town's MS4 in the near future. Work on Phase I of the sewer expansion (Robert Gray Ave and Riverside Drive neighborhoods) is currently underway with construction anticipated in spring 2018. The TWWD is responsible for this project.</p> <p>Additionally, an OWTS redesign was completed for Dadson Mobile Home Estates and approved in 2015. This project received an OWTS permit approval from RIDEM in December 2017 and construction is anticipated in the near future.</p> <p>The DPW is responsible for informing public employees, businesses, and the general public of hazards associated with illicit discharges and improper waste disposal. The TWWD has made copies of educational materials on OWTS design and maintenance available to the public to help reduce the incidence of illicit discharges to the MS4. These resources are available on the District's website (twwd.org/customer-resources/).</p>	

Additional Measurable Goals and Activities

No additional goals or activities were reported in 2017.

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

# of Illicit Discharges Identified in 2017: 96	# of Illicit Discharges Tracked in 2017: 25
# of Illicit Discharges Eliminated in 2017: 0	# of Complaints Received: 3
# of Complaints Investigated: 25	# of Violations Issued: 0
# of Violations Resolved: 25	# of Unresolved Violations Referred to RIDEM: 0
Total # of Illicit Discharges Identified to Date (since 2003): 183	Total # of Illicit Discharges remaining unresolved at the end of 2017: 71
<p>Summary of Enforcement Actions: No violations were issued or reported to the RIDEM Office of Compliance and Inspection for further investigation in 2017.</p> <p>Of 25 investigations, 25 were sump pumps connecting, no violations were issued. 96 small pipes were found to be connected to the town system in 2017.</p>	
<p>Extent to which the MS4 system has been mapped:</p> <p>Outfalls in the MS4 have been mapped system-wide. Additionally, the Town possesses paper maps of catch basins.</p> <p>Total # of Outfalls Identified and Mapped to date: The Town has mapped and sequentially numbered 108 outfalls and other structures. Of these, at least 45 structures do not appear to require future survey and sampling by the Town, as they do not represent MS4 stormwater discharge structures (outfalls). Some are privately owned or are the responsibility of the state DOT. Other structures previously mapped as outfalls are actually catch basins or culverted streams (not outfalls). A map showing the location and type of mapped outfalls and other structures is attached.</p> <p>Catch Basins, manholes and pipes currently being mapped.</p>	

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

Interconnection:	Date Found:	Location:	Name of Connectee:	Originating Source:	Planned and Coordinated Efforts and Activities with Connectee:
None identified					



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.)

Responsible Party Contact Name: WILLIAM M. ANDERSON, P.E.

Phone: (401) 625-6760 Email: dpw@tiverton.ri.gov

IV.B.4.b.1	<p>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.</p> <p>Date of Adoption: <u>January 24, 2011</u></p> <p>If the Ordinance was amended in 2017, 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.</p>
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Chapter 65 of the Town's Code of Ordinances prohibits illicit discharges into the MS4 from construction sites. This ordinance was adopted on October 15, 1991. The DPW Director, Building Inspector, and/or Planning Board representative oversee and enforce Town Ordinances during ongoing construction through daily visits to all construction work in Town. Any non-compliance can result in forfeiting of cash surety by the contractor.

The Town Council adopted an amendment to Chapter 65, Article I of the Town Codes for Stormwater II Compliance on January 24, 2011. The ordinance provides the adoption of a regulatory mechanism and policy to require erosion and sediment control at construction sites.

The amendment refers to the 2010 RI Stormwater Design and Installation Standards Manual.

No additional amendments were made to this ordinance in 2017.

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.
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No information was submitted by the public.

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.
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Non-compliant construction site operators are typically dealt with internally within the Town, either through the Building Inspector or DPW Director. However, the Town has referred non-compliant construction site operators to RIDEM in the past. No new referrals to RIDEM were made in 2017.

Additional Measurable Goals and Activities

No additional measurable goals or activities to report for 2017.

SECTION II. A - Plan and SWPPP/SESC Plan Reviews during Year 14 (2017), 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 must be conducted by adequately trained personnel and incorporate consideration of potential water quality impacts.

of Construction Applications Received: __42*

of Construction Reviews Completed: 42*

of Permits/Authorizations Issued: __ 42*

*Some of these reviews were for projects <1 acre

Summary of Reviews and Findings, include an evaluation of the effectiveness of the program. Identify person(s) /Department and/or parties responsible for the implementation of this requirement:

The Planning Board's Consulting Engineer and DPW Director are responsible for reviewing the draft sediment and erosion plans. New SESC plans were received and reviewed for 10 projects in 2017, as follows:

- 6 minor subdivisions
- 2 major subdivisions
- 2 commercial developments

SECTION II.B - Erosion and Sediment Control Inspections during Year 14 (2017), 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).

# of Active Construction Projects: 8	
# of Site Inspections: 76	# of Complaints Received: 4
# of Violations Issued: 2	# of Unresolved Violations Referred to RIDEM: 0

Summary of Enforcement Actions, include an evaluation of the effectiveness of the program. Identify person(s) /Department and/or parties responsible for the implementation of this requirement:

The Planning Board's Consulting Engineer and DPW Director are responsible for completing inspections. 2 violations were issued and resolved in 2017, as follows:

Violations included work performed without a permit, referred to CRMC.



**MINIMUM CONTROL MEASURE #5:
POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
(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: WILLIAM M. ANDERSON, P.E.

Phone: (401) 625-6760 **Email:** dpw@tiverton.ri.gov

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.
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Most construction in Town is associated with subdivision development. The DPW Director and Planning Board's Consulting Engineer coordinate compliance with MS4 permit requirements through post-construction inspections.

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 RIPDES Rule 31(b)(15) (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).
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No new industrial stormwater discharges were referred to RIDEM in 2017.

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: <u>December 13, 1995; Amended January 24, 2011</u> If the Ordinance was amended in 2017, 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.
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Appendix B – "Land Development and Subdivision Regulations" was adopted on December 13, 1995. The regulations require drainage systems to be designed in accordance with the Rhode Island Storm Water Design and Installation Standards Manual.

The Town Council adopted an amendment to Chapter 65 of the Town Codes for Stormwater II Compliance on January 24, 2011. The ordinance provides the adoption of a regulatory mechanism to address post-construction runoff from new development and redevelopment. The amendment refers to the 2010 RI Stormwater Design and Installation Standards Manual and was incorporated under Article II Section 65-14 to 65-22. The Land Development and Subdivision Regulations were amended by the Planning Board on July 15, 2014 to add Article XV, Construction Specifications, which requires post-construction conformance with the provisions of Chapter 65.

No amendments to this ordinance were made in 2017.

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.
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Catch basins are inspected annually during spring cleanouts and an additional time during the Town's mosquito abatement program. Other structural BMPs are inspected regularly and maintained when necessary. Structural BMPs are repaired when inspections identify the need.

POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
cont'd

Additional Measurable Goals and Activities

No additional measurable goals or activities to report for 2017.

SECTION II.A. - Plan and SWPPP/SEC Plan Reviews during Year 14 (2017), 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).

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. Identify person(s) /Department and/or parties responsible for the implementation of this requirement:

The Planning Board's Consulting Engineer and/or the DPW Director are responsible for reviewing all post-construction BMPs before cash surety is returned to the contractor. This process is quite effective due to the amount of money held in cash security until approval of construction.

SECTION II.B. - Post Construction Inspections during Year 14 (2017), 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).

# of Active Construction Projects: 10	# of Construction Projects Completed: 0
# of Site Inspections for proper Installation of BMPs: 76	# of Complaints Received: 2
# of Violations Issued: 0	# of Unresolved Violations Referred to RIDEM: 0
Summary of Enforcement Actions:	
The operator is unaware of violations being issued in 2017	
Identify person(s) /Department and/or parties responsible for the implementation of this requirement:	
<ul style="list-style-type: none"> - DPW Director - Consulting Engineer (Steere Engineering) 	

SECTION II.C. - Post Construction Inspections during Year 14 (2017), 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: 6	# of Complaints Received: 0
# of Violations Issued: 0	# of Unresolved Violations Referred to RIDEM: 0

POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
cont'd

Summary of Activities and Enforcement Actions. Evaluate the effectiveness of the Program in minimizing water quality impacts.

Six post-construction inspections were completed by the Town in 2017. Additionally, the operator is unaware of violations being issued in 2017.

Identify person(s) /Department and/or parties responsible for the implementation of this requirement:

- DPW Director
- Consulting Engineer (Steere Engineering)

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 Planner/Town Engineer

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

Planning Board

POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
cont'd

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	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
b. A description of the permanent stormwater BMPs that will be operated and maintained	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
c. The location of the permanent stormwater BMPs that will be operated and maintained	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
d. A timeframe for routine and emergency inspections and maintenance of all permanent stormwater management BMPs	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
e. A requirement that all inspections and maintenance activities are documented	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
f. Annual submission of inspection/maintenance certification/documentation to the MS4	<input type="checkbox"/> YES <input checked="" type="checkbox"/> 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	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
h. Steps available for addressing a failure to maintain the stormwater controls and BMPs	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Please elaborate, if appropriate:
 All new development must use O&M agreement.

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?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
b. Inspections?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
c. Maintenance and schedules?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
d. Complaints?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
e. Non-Compliance?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
f. Enforcement actions?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
cont'd

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:

Anticipated for 2018.

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



POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

**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: WILLIAM M. ANDERSON, P.E.

Phone: (401) 625-6760 **Email:** dpw@tiverton.ri.gov

IV.B.6.b.1.i	<p>Use the space below to describe activities and actions taken to identify structural BMPs 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.</p> <p>Do you have an inventory of MS4-owned/operated BMPs? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>Total # of MS4-owned/operated BMPs (does not include CBs or MHs): <u>31</u></p>
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The Storm Water Steering Committee originally identified structural BMPs owned by the Town in 2003. No additional BMPs were added in 2017.

IV.B.6.b.1.ii	<p>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.</p> <p># of MS4-owned/operated BMPs inspected in 2017: <u>1,518</u></p> <p># of MS4-owned/operated BMPs maintained/cleaned in 2017: <u>169</u></p> <p># of MS4-owned/operated BMPs repaired in 2017: <u>18</u></p> <p>Does your municipality/MS4 have a system for tracking:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;">a. Inspection schedules of MS4-owned BMPs?</td> <td style="text-align: center;"><input type="checkbox"/> YES</td> <td style="text-align: center;"><input checked="" type="checkbox"/> NO</td> </tr> <tr> <td style="padding-left: 20px;">b. Maintenance/cleaning schedules of MS4-owned BMPs?</td> <td style="text-align: center;"><input checked="" type="checkbox"/> YES</td> <td style="text-align: center;"><input type="checkbox"/> NO</td> </tr> <tr> <td style="padding-left: 20px;">c. Repairs, corrective actions needed?</td> <td style="text-align: center;"><input checked="" type="checkbox"/> YES</td> <td style="text-align: center;"><input type="checkbox"/> NO</td> </tr> <tr> <td style="padding-left: 20px;">d. Complaints?</td> <td style="text-align: center;"><input type="checkbox"/> YES</td> <td style="text-align: center;"><input checked="" type="checkbox"/> NO</td> </tr> </table> <p>Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track stormwater BMPs, inspections, and maintenance? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>	a. Inspection schedules of MS4-owned BMPs?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	b. Maintenance/cleaning schedules of MS4-owned BMPs?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	c. Repairs, corrective actions needed?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	d. Complaints?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
a. Inspection schedules of MS4-owned BMPs?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO											
b. Maintenance/cleaning schedules of MS4-owned BMPs?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO											
c. Repairs, corrective actions needed?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO											
d. Complaints?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO											

The Town performs catch basin cleaning and street sweeping annually in the spring to clean up road sand and other debris that has accumulated over the year. Some catch basins (for example, in the northern part of Town at the bottom of steep hills), collect more sand and are cleaned out on a more frequent basis, as needed.

When flooding occurs, manholes and culverts are also inspected in addition to the catch basins. Maintenance of town-owned basins and structures resumed in 2017.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

IV.B.6.b.1.iii	<p>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.</p> <p>Total # of CBs within regulated area (including SRPW and TMDL areas): <u>1,518</u></p> <p># of CBs inspected in 2017: <u>1,518</u> % of Total inspected: <u>100</u></p> <p># of CBs cleaned in 2017: <u>1,518</u> % of Total cleaned: <u>100</u></p> <p>Quantity of sand/debris collected by cleaning of catch basins: <u>545 cubic yards</u></p> <p>Location used for the disposal of debris: <u>Tiverton Landfill</u></p> <p>Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track the inspections and cleaning of catch basins? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>
<p>The Town has successfully inspected catch basins annually for the past fourteen years. The Town's vacuum truck became inoperative in 2016, resulting in fewer cleanings than in previous years. A new clamshell was purchased and used to clean catch basins in 2017.</p>	
IV.B.6.b.1.iv	<p>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</p>
<p>The Town fills road shoulders and cleans roadway swales on an as needed basis. Degraded shoulder areas are also loamed and seeded. Inspections are ongoing by DPW personnel. In 2017, the Town stabilized shoulders on Kenyon Road, Willow Tree Road, and portions of Kitchener Street and Riverside Drive. Additionally, portions of the Lake Road drainage swale and culverts were cleaned.</p>	
IV.B.6.b.1.v	<p>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.</p>
<p>The Town's DPW personnel inspect the MS4 for signs of deterioration, including scouring of outfall pipes, on a regular basis, especially after major storm events.</p> <p>The Town's DPW and consultant ESS Group, Inc. completed a dry weather outfall survey and sampling program in October/November 2011 that identified areas of scour or excessive sedimentation.</p>	
IV.B.6.b.1.vi	<p>Use the space below to indicate if all streets and roads within the urbanized area were swept annually and if not indicate reason(s). Evaluate appropriateness and effectiveness of this requirement.</p> <p>Total roadway miles within regulated area (including SRPW and TMDL areas): <u>94</u></p> <p>Roadway miles that were swept in 2017: <u>94</u> % of Total swept: <u>100</u></p> <p>Type of sweeper used: <input checked="" type="checkbox"/> Rotary brush street sweeper <input type="checkbox"/> Vacuum street sweeper</p> <p>Quantity of sand/debris collected by sweeping of streets and roads: <u>583 cubic yards</u></p> <p>Location used for the disposal of debris: <u>Tiverton Landfill</u></p> <p>Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track the annual sweeping of streets and roads? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

The Town secured funding under the 2014 Bay and Watershed Restoration Grant Program and purchased a new rotary street sweeper in order to continue with their annual maintenance program. This allowed the Town to successfully sweep all public roadways in 2016 and 2017. The removal of 583 cubic yards of material indicates that this program has been successful in preventing substantial discharge of road sand, debris, and associated pollutants from the MS4.

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.
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All new subdivisions are required to install grates on their inlet and outlet stormwater drainage piping (for pipes 24 inches or greater in diameter), clean all drainage structures and lines, and sweep roadways. Other features on existing infrastructure also help to reduce floatables and other pollutants. One example is the sluiceway outlet and grate at Creamer Pond, which drains to the Sakonnet River.

Grinnell's Beach and Jack's Island have litter receptacles for public use. The Town also provides litter receptacles at the Bulgarmarsh, Town Farm, and Pocasset School playgrounds. These are regularly picked up and disposed of by the Town. Floatables and other pollutants have been reduced from the DPW yard by proper stockpiling of materials and maintenance of BMPs.

These controls have been effective in reducing floatables and debris in the MS4 and receiving waters.

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.
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Do you have a system for tracking actions to remove and dispose of waste? YES NO

Waste from the MS4 and other municipal operations are sent to the Town Landfill. Records detailing volumes of material removed and sent to the Landfill are maintained in the DPW Director's library.

A pay-as-you-throw waste reduction program began in 2011 and has reduced trash volume by 50%.

IV.B.6.b.4 and IV.B.6.b.5	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 a 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.
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The DPW maintains salt and sand storage in a fully enclosed structure to prevent stormwater pollution. The DPW's maintenance activities, which include the garage and wash bay, are tied into the Town's sewer system via an oil-water separator. Stormwater is effectively prevented from entering the sewer system, as activities are not exposed to stormwater.

Visual monitoring was completed on a quarterly basis in 2017.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

IV.B.6.b.6	<p>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 staff municipal participation in the URI NEMO stormwater public education and outreach program and all in-house training conducted by municipality or other parties. Evaluate appropriateness and effectiveness of this requirement.</p> <p>How many stormwater management trainings have been provided to <i>municipal employees</i> during this reporting period? <u> 0 </u></p> <p>What was the date of the last training? <u> / / </u> / N/A <u> </u></p> <p>How many <i>municipal employees</i> have been trained in this reporting period? <u> 0 </u></p> <p>What percent of <i>municipal employees</i> in relevant positions and departments received stormwater management training? <u> 0 </u> %</p>
<p>All new DPW employees are trained initially on proper stormwater pollution prevention techniques. Stormwater pollution prevention and good housekeeping are regular activities performed by DPW staff. Training for proper catch basin cleaning is conducted yearly.</p> <p>No external training was performed in 2017.</p>	
IV.B.6.b.7	<p>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.</p>
<p>New development plans are reviewed by the DPW Director and the Planning Board. This is effective in minimizing water quality impacts from new developments.</p>	
<p>Additional Measurable Goals and Activities</p> <p>No additional measurable goals or activities to report for 2017.</p>	

SECTION II.A - Structural BMPs (Part IV.B.6.b.1.i)

BMP ID:	Location:	Name of BMP Owner/Operator:	Description of BMP:	Frequency of Inspection:
N/A	Tiverton Town Library off Roosevelt Avenue	Tiverton DPW	Three infiltration basins	Annually
N/A	Ford Farm Road	Tiverton DPW	Two detention ponds	Annually/as needed
N/A	Tiverton Housing	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Cherry Lane	Tiverton DPW	One detention pond	Annually/as needed
N/A	265 Bridle Way	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Kevin Drive	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Across from 90 Frasier Lane (Wilderness Estates)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Bayberry Lane (Indian Rock Estates)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Tanglewood Drive (Indian Rock Estates)	Tiverton DPW	One undescribed BMP	Annually/as needed

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

N/A	Abel Hart Lane (Old Crandall Commons/Woods)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	South Commons Road (Old Crandall Commons/Woods)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Gooseberry Lane (Winterberry Woods)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Teaberry Drive (Winterberry Woods)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Ledoux Lane (Meadow Woods Estates)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Front Entrance of William Barton Estates	Tiverton DPW	Two undescribed BMPs	Annually/as needed
N/A	Raider's Way (William Barton Estates)	Tiverton DPW	Two undescribed BMPs	Annually/as needed
N/A	William Barton Drive (William Barton Estates)	Tiverton DPW	Two undescribed BMPs	Annually/as needed
N/A	Daniel Page Court (William Barton Estates)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Silver Beech Road (Beech Tree Hill)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Mountain Laurel Lane (Beech Tree Hill)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Across from 255 Cottrell Road (Cottrell Farms)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Across from 420 Cottrell Road (Cottrell Farms)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Carey Lane cul-de-sac (Villages on Mount Hope Bay)	Tiverton DPW	One undescribed BMP	Annually/as needed
N/A	Rhododendron Drive	Tiverton DPW	One detention pond	Annually/as needed
N/A	Christopher Avenue (Brayton Woods)	Tiverton DPW	One undescribed BMP	Annually/as needed

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:
13	Old Colony Terrace	Scour	Addressing issue in 2018	Mount Hope Bay

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

The Town Library was completed in 2016 and incorporated three infiltration basins to reduce runoff and promote infiltration and recharge. No new municipal construction projects are currently planned.

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).

No additional information was collected in 2017.



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.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

The following water bodies in Tiverton have an approved TMDL:

- Sucker Brook (in Statewide Bacteria TMDL) – Cause of Impairment: Enterococcus (TMDL Approved 2011)
- Mt. Hope Bay – Cause of Impairment: Fecal Coliform (TMDL Approved 2010)
- Sakonnet River – Cause of Impairment: Fecal Coliform (TMDL Approved 2005)
- Stafford Pond – Cause of Impairment: Excess Algal Growth, Total Phosphorus, and Dissolved Oxygen (TMDL Approved 1999)

Of these, the TMDL for Fecal Coliform for the Mount Hope Bay/Kickemuit River Estuary requires additional work to be completed by the Town of Tiverton. Ongoing work toward meeting the requirements of this TMDL includes the following:

There are two primary outfalls identified by the TMDL in the Town of Tiverton. These outfalls are located in close proximity to each other at the termini of Summerfield Lane and Robert Gray Avenue. The TMDL requires that these outfalls be mapped, assessed, and prioritized for treatment.

Toward this end, the Town and consultant ESS Group, Inc. completed an initial illicit discharge tracking study in the Summerfield Lane and Robert Gray Avenue outfall drainage systems in November 2011. This study used optical brightener samplers to begin identifying the extent of wastewater contamination in each drainage system. The results identified potential source areas of wastewater contamination for more detailed study and subsequent elimination.

In 2013, 2014, and 2015 the Town continued investigations of potential bacteria sources in the Summerfield Lane and Robert Gray Avenue neighborhoods. These investigations helped to further isolate the most likely dry- and wet-weather sources.

The Tiverton Wastewater District was established in 2014 to implement the sewerage recommendations of the 2013 Facilities Plan Update, which will contribute significantly to satisfying the requirements of the TMDL. As of the end of 2017, work on Phase I of the sewer expansion continues, with construction anticipated in 2018.

In 2015, the Town obtained funding from the Bay and Watershed Restoration Grant Program to support maintenance and improvement of stormwater infrastructure. As a result, a new street sweeper and CCTV sewer camera were purchased in 2015. Separately, a clamshell catch basin cleaner was also purchased in 2017. The street sweeper and a catch basin cleaner are used Town-wide, as appropriate, but contribute to good housekeeping efforts to reduce stormwater pollutants in the Summerfield Lane and Robert Gray Avenue TMDL priority outfall catchments.

Sewer camera work to further investigate illicit discharges in these catchments is anticipated.



POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd
SPECIAL RESOURCE PROTECTION WATERS (SRPWs)

SECTION I. In accordance with Rule 31(a)(5)(i)G of the *Regulations for the Rhode Island Pollutant Discharge Elimination System (RIPDES Regs)*, 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 to Rule 31(g)(5)(iii). A list of SRPWs can be found in Appendix D of the *RIDEM Water Quality Regulations* at this link:

<http://www.dem.ri.gov/pubs/regs/regs/water/h20q09a.pdf>

The 2008 303(d) Impaired Waters list can be found in Appendix G of the *2008 Integrated Water Quality Monitoring and Assessment Report* at this link: <http://www.dem.ri.gov/programs/benviron/water/quality/pdf/iwqmon08.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.

The following water bodies were identified in Tiverton as SRPWs in Appendix D of the RIDEM Water Quality Regulations:

- Fogland Point Marsh
- Nonquit Pond
- Sapowet Marsh
- Stafford Pond

The following water bodies were identified in Tiverton in the 2016 303(d) Lists of Impaired Waters:

- Nonquit Pond – Cause of Impairment: Phosphorus and Total Organic Carbon (TMDL Needed and Scheduled for 2018)
- Mt. Hope Bay – Cause of Impairment: Total Nitrogen and Dissolved Oxygen (TMDL Needed and Scheduled for 2024)
- Sucker Brook– Cause of Impairment Enterococcus and Copper (TMDL Needed and Scheduled for 2026)
- Several additional water bodies (listed below) are newly listed for impairment related to Bacteria (TMDL Needed and Scheduled for 2030)
 - Adamsville Brook and Tribs
 - Patchet Brook
 - Sin and Flesh Brook and Tribs

The discharges associated with Tiverton's MS4 to an identified SRPW or impaired water includes Stafford Pond, Nonquit Pond and Mt. Hope Bay. The following categories represent the six minimum control measures and an assessment of the progress expanding the MS4 Phase II Stormwater Program to include the discharges to these water bodies.

Public Education and Outreach

The Town's Conservation Commission works alongside several other committees, boards, the DPW, and town residents on the Fogland Beach Oversight Committee, dealing with issues such as sediment and erosion control.

For a complete description of measurable goals and BMPs, please refer to Section IV.B.1.b.1.

Public Involvement/Participation

Refer to Section IV.B.2.b.2.ii.

Illicit Discharge Detection and Elimination

The Town required residents to hire licensed septic system inspectors to determine the viability of all onsite septic discharge systems in the Stafford Pond Watershed by July 2007 and the Sakonnet Waterfront by July 2012.

Please refer to Section IV.B.3.b.5.ii, iii, iv, & v for further information.

Construction Site Runoff Control

In general, construction projects must submit erosion and sediment control plans for review by the Planning Board. The DPW Director and/or Planning Board representative oversee and enforce Town ordinances during ongoing construction through inspections of construction work in Town. Any non-compliance can result in forfeiting of cash surety by the contractor.

The watersheds of Stafford and Nonquit Ponds are designated as Watershed Protection Overlay Districts by Town ordinance and

POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd

subject to special protections. Prior to the issuance of any construction permit within these districts, the applicant may be required to submit an Environmental Review Statement (ERS) for review and approval by the Planning Board. The purpose of this process is to protect the quality and quantity of surface water in Stafford and Nonquit Ponds.

Post Construction Runoff Control

Due to rural nature of the Town of Tiverton, practically all construction in Town is subdivision development. These private developments are periodically inspected by the DPW Director and the Planning Board's Consultant (Civil Engineer) to determine compliance with MS4 requirements.

Pollution Prevention/Good Housekeeping

All structural BMPs associated with the MS4 are inspected periodically. Catch basins are inspected annually during spring cleanouts and an additional time during the Town's mosquito abatement program. The oil/water separator and salt storage shed at the Town DPW facility are inspected quarterly and cleaned on an as needed basis. The three infiltration basins at the Town Library (construction completed in 2016) are inspected on an annual basis and after major storms, as needed. Other BMPs owned or operated by the Town are inspected on an approximately annual basis, with additional inspection as needed.

The Town purchased a new street sweeper in 2015 and completes street sweeping in summer. A new clamshell catch basin cleaner was purchased in 2017 and is now used to complete catch basin maintenance activities.



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1 inch = 2,500 feet

Source: 1) ESRI, World Map, 2016
2) Town of Tiverton, Outfalls, 2011

Outfalls

Figure 1