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## RIPDES SMALL MS4 ANNUAL REPORT GENERAL INFORMATION PAGE

RIPDES PERMIT #RIR040018

REPORTING PERIOD:       **YEAR 18**  
Jan 2021-Dec 2021

**OPERATOR OF MS4**

Name: Town of Bristol			
Mailing Address: 10 Court Street			
City: Bristol	State: RI	Zip: 02809	Phone: (401) 253-7000
Contact Person: Edward M. Tanner		Title: Principal Planner	
		Email: <a href="mailto:etanner@bristolri.gov">etanner@bristolri.gov</a>	
Legal status (circle one):			
PRI - Private	<b>PUB - Public</b>	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    Diane M. Williamson

Print Title    Director of Community Development

**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:** Edward M. Tanner, Principal Planner, Department of Community Development

**Phone:** (401) 253-7000

**Email:** etanner@bristolri.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.
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The Department of Community Development is responsible for achieving this goal. During Permit Year 18, public education information relating to stormwater pollution was provided by the Town in the form of informational meetings, news releases, and website postings. The Town also benefits from public education activities delivered by various community groups including Save Bristol Harbor (SBH), Save the Bay (STB), Eastern RI Conservation District (ERICD), the Kickemuit River Council (KRC), Roger Williams University (RWU), and Mosaico Business and Community Development Corporation (Mosaico CDC). Public education has been centered on shoreline cleanups, water quality monitoring, storm drain stenciling, student education, and pet waste disposal. The Town of Bristol also maintains a "Soil Erosion and Stormwater Management" page on its public web site (see <https://www.bristolri.gov/departments/community-development/soil-erosion-stormwater-management/>). This site includes general information about stormwater and stormwater pollution topics, as well as resources and links to other information sources relating to soil erosion & sedimentation control and stormwater management.

During Permit Year 18 (2021), Save the Bay, Save Bristol Harbor, Mosaico, RWU, and the Town's Keep Bristol Clean taskforce (operated by the Department of Public Works (DPW)) organized several annual shoreline cleanups throughout Bristol. The Town's DPW assisted with the cleanups by removing, recycling or disposing of all items collected. On May 10, 2021 the Bristol held its 32<sup>nd</sup> annual Town-Wide Cleanup Day. Over 120 volunteers, representing a variety of community groups, collected 2,700 pounds of refuse from shorelines and roadways throughout Bristol. See [attached](#) press release describing the event.

Through Mosaico CDC's "Sense of Pride" program, in 2021 volunteers from Save Bristol Harbor - using a realistic watershed model - presented hands-on educational activities on watershed hydrology and stormwater pollution to approximately 200 fourth grade students from four elementary schools in Bristol. In addition, students participating in these programs conducted gardening, and neighborhood or shoreline cleanup activities.

With assistance and training from the URI Watershed Watch program and scientists from URI and Brown University, 35 to 40 citizen volunteers from SBH, conduct water quality sampling and testing at 15 sites located within Bristol Harbor and its tributary Silver Creek. Samples are also collected from three locations on the easterly side of Bristol within the Kickemuit River and Mt. Hope Bay (each TMDL affected areas). Surface water samples are collected from these locations bi-weekly from April through October and analyzed in the field for a variety of parameters. In addition, samples are collected monthly from each location and delivered to URI for laboratory analysis. This valuable work – now in its 13<sup>th</sup> year - helps the Town, other government agencies, and the public further understand water conditions in the harbor and guide decision making within the watershed. In Permit Year 18, the Town of Bristol contributed funds to support SBH's efforts by paying for the cost of laboratory analysis for eight of these sampling locations. See [attached](#) sampling report from URI documenting 2009-2021 monitoring results. In addition to sampling activities SBH and the Town of Bristol provided funding and support to the Mount Hope High School Marie Science program Silver Creek Field Studies project in which approximately 60 upper grade high school students work annually with staff from STB to study and monitor the health of the coastal environment within Silver Creek. SBH members also present educational information relating to water quality at public events such as Bristol's annual Harbor Festival.

The Town of Bristol continues to maintain 15 "Sidewalk Buttler" receptacles for the collection and disposal of cigarette waste. These receptacles were installed on existing sign posts and lamp posts throughout the downtown with the goal of reducing litter and limiting pollution within Bristol Harbor. Discarded cigarette butts not only litter sidewalks and roadways, but they are routinely washed into storm drains and enter our waterways, and are one of the most common items collected during local shoreline cleanups. The installation of these units was conducted in partnership with SBH, and included a public education campaign to inform the public about the water quality impacts from cigarette waste and the need for proper disposal.

In March 2021, The Town mailed over 600 annual dog license renewal applications to resident dog owners. Each of these renewal applications include a notation regarding proper disposal of pet waste with reference to Town Ordinance requiring proper pet waste disposal.

In 2021, the Town continued construction of water quality and habitat restoration work at the Bristol Golf Course. This recreational property lies at the headwaters of the Silver Creek watershed and also the watershed of an unnamed stream flowing to Jacobs Point and the Warren River. The golf course restoration project was designed and permitted in 2019, and construction began in 2020 with funding assistance from the EPA Southeast New England Program (SNEP) Watershed Grant Program, RIDEM's Section 319 Non-point Source Program, and the Municipal Resilience Program (MRP) of the Rhode Island Infrastructure Bank (RIIB). This project includes stormwater structural BMP's as well as LID techniques, and included a robust public engagement and education program including planning and habitat restoration planting assistance from STB and SBH volunteers as well as

educational signage and brochures. Copies of two local newspaper articles describing the project to the public are **attached**.

In May 2021, the Town hosted a workshop for residents to learn about and make rain barrels for their property to help reduce stormwater runoff. This meeting was hosted by Eastern Rhode Island Conservation District and a copy of the workshop advertisement is **attached**. Approximately 20 residents attended this workshop and took home a rain barrel or two.

In spring 2021, the Bristol Conservation Commission, in collaboration with Save the Bay and Save Bristol Harbor, completed a brochure titled "Healthy Yards / Healthy Waters – Sustainable Lawn Care, A Guide for Homeowners" which discusses the topic of nutrient runoff from residential properties. This brochure was professionally printed and has been distributed throughout the community in Town-owned information kiosks and within public buildings such as the Town Hall, Library, and Maritime Center. The brochure has also been posted to the Town's website at <https://www.bristolri.gov/government/commissions/conservation-commission/>. A copy of this brochure is **attached**.

In summer 2021, Bristol's stormwater management program was highlighted as a success story by the Association of State Floodplain Managers (ASFM) with a feature story on its website. Bristol's stormwater management program was highlighted for its holistic approach to improve water quality, increase resiliency, and achieve a Class 8 rating (more recently increased to Class 7) in the Federal Emergency Management Agency (FEMA), Community Rating System (CRS); resulting in a 10-15% discount on flood insurance, where needed, for all Bristol resident. A copy of the ASFM success story may be found at <https://floodsciencecenter.org/products/crs-community-resilience/success-stories/bristol-rhode-island/> and a copy is **attached**.

In the following permit year, the Town of Bristol plans to continue to work with various community groups and schools to achieve its public education and outreach goals. The Town will also continue to update and enhance its website to include additional stormwater education information. The Town believes that these activities are both appropriate and effective to educate the community on how to reduce stormwater pollution

**PUBLIC EDUCATION AND OUTREACH cont'd**

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.
<p>The Department of Community Development is responsible for achieving this goal. The Town of Bristol utilized activities and membership of Save Bristol Harbor, Save the Bay, the Kickemuit River Council, Mosaico CDC, Eastern Rhode Island Conservation District, and school groups to assist with this goal. The Town also maintains a website with a section dedicated to “soil erosion and stormwater management” issues and including public education materials and links to stormwater pollution education resources. In 2021, with the assistance of the Save Bristol Harbor, Save the Bay, and Mosaico CDC, the Town used the water quality sampling, shoreline cleanup, and watershed modeling events as opportunities to educate the community on the stormwater program. These events include shoreline and town-wide cleanup and Earth Day events, as well as the annual Harbor Festival. During this period the Town also continued its partnership with Save Bristol Harbor and the Mt. Hope High School’s marine science and environmental science classes to evaluate and understand water quality impacts from stormwater, and conduct water quality monitoring activities. In previous permit years, the STB and SBH volunteers and students have also assisted the Town with stormdrain stenciling and dry-weather screening of stormwater outfalls. In the following permit year, the Town will continue to partner with non-governmental community groups to educate the public, and will utilize citizen volunteers to conduct further water quality monitoring activities.</p>	

**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:

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
X Construction Sites	Developers / Contractors / residents	Sediment, floatables	Website, Mailings, Brochures
X Pesticide and Fertilizer Application	Residents	Nutrients	Website, Brochures
X General Stormwater Management Info	Residents	Bacteria, Sediment, Nutrients, Floatables	Website, Displays, Newspaper, Brochures
X Pet Waste Management	Dog Owners	Bacteria	Brochure, licensing
X Household Hazardous Waste Disposal	Residents	Hydrocarbons	Website, Brochures, Newspaper, Eco-Depot
X Recycling	Residents	Floatables	Website, Newspaper, Brochures, Direct Mail
X Illicit Discharge Detection and Elimination	Residents	Bacteria	Website
<input type="checkbox"/> Riparian Corridor Protection/Restoration			
X Infrastructure Maintenance	Town Employees	Sediments, Nutrients, Floatables	Training
X Trash Management	Residents	Floatables	Website, Newspaper, Brochures
<input type="checkbox"/> Smart Growth			
<input type="checkbox"/> Vehicle Washing			
X Storm Drain Marking	Residents	Hydrocarbons, Bacteria, Nutrients	Visible Markings
<input type="checkbox"/> Water Conservation			
X Green Infrastructure/Better Site Design/LID	Residents	Nutrients, Bacteria, Sediments	Website
<input type="checkbox"/> Wetland Protection			
x Other: Litter	Residents	Floatables	Brochure,
<input type="checkbox"/> None			

**Additional Measurable Goals and Activities**

Please list all stormwater training attended by your staff during the 2021 calendar year and list the name(s) and municipal position of all staff who attended the training.

Trainings: In 2021, Bristol staff did not attend any specific stormwater training programs offered in Rhode Island. Department of Community Development Staff did, however, view several "Soak Up the Rain New England" webinars provided by the USEPA website; and staff continue to attend and read stormwater training and educational materials provided by government and nonprofit agencies.

Attending name of staff and title: \_\_\_\_\_

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 & Title:** Edward M. Tanner, Principal Planner, Department of Community Development

**Phone:** (401) 253-7000

**Email:** etanner@bristolri.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.
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The Department of Community Development is responsible for achieving this measurable goal. The Town of Bristol utilizes a variety of activities to encourage public involvement in its stormwater program. This includes utilizing the membership and activities of Save Bristol Harbor, Mosaico CDC, Save the Bay, Eastern RI Conservation District, Kickemuit River Council, and the Bristol-Warren Regional School District to assist with this goal. In addition, the Town's Conservation Commission acts as the Town's stormwater committee and reviews the program goals and objectives, and participates in field activities.

The public participates in the stormwater management program primarily through the cooperation of several nonprofit organizations operating in town and the local school district. SBH, Mosaico CDC, STB, KRC, and the Bristol-Warren Regional School District all provide public involvement opportunities that are supported by the Town through shoreline cleanup activities, storm drain marking programs, coastal water quality monitoring, and educational talks and presentations. These activities are generally directed towards school aged children and their families. Coastal shoreline cleanups, watershed modeling programs and other public involvement activities were conducted in 2021. In addition, the Town continued to support field activities, including a stormwater monitoring program and coastal marsh habitat studies program, through a partnership with SBH that involves upper level students from Mt. Hope High School. The measures described in this section highlight activities that have had a positive impact on the community and engaged the public to increase understanding of issues surrounding water quality and stormwater pollution.

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

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Cleanup Events     | <input type="checkbox"/> Storm Drain Markings            |
| <input type="checkbox"/> Comments on SWMP Received     | <input type="checkbox"/> Stakeholder Meetings            |
| <input type="checkbox"/> Community Hotlines            | <input checked="" type="checkbox"/> Volunteer Monitoring |
| <input checked="" type="checkbox"/> Community Meetings | <input checked="" type="checkbox"/> Plantings            |
| <input checked="" type="checkbox"/> Other (describe)   |  |

The Town of Bristol advertises events such as shoreline cleanups, and promotes activities of local nonprofit organizations using the Town's website and discussion of issues and events at public meetings.



**Additional Measurable Goals and Activities**

(BMP ID's correspond to Bristol's Phase II Storm Water Management Program Plan adopted in 2008)

BMP ID 2-2 (Hold regular storm water steering committee meetings) and BMP ID 2-3 (Hold quarterly storm water steering committee meeting (2<sup>nd</sup> through 5<sup>th</sup> Year):

In Year 18 (2021), the Town planning and public works staff worked to address known drainage problems and to plan and implement improvements to the municipal storm drain system. In addition, the Conservation Commission, which acts as the Town's stormwater committee, met monthly and continued working on several community outreach ideas relating to water quality and stormwater management such as community cleanups and public education initiatives.

BMP ID 2-4 (Coordinate with Save the Bay to continue storm drain stenciling program)

In previous permit years, STB and SBH organized numerous storm drain marking initiatives in the downtown areas surrounding Bristol Harbor. In the following permit year, the Town will evaluate additional needs for storm drain stenciling and marking to identify additional locations where it may be beneficial.

BMP ID 2-5 (Identify locations of marked storm drains using GIS in year 2)

The Town of Bristol has completed field and mapping work to update the GIS to include locations of all storm drain structures, including pipelines, catch basins, manholes, and outfalls. These maps do not yet specifically identify marked storm drains.

BMP ID 2-6 (Develop a program to prioritize storm drain stenciling using GIS in year 2 and 3)

In 2010, the Town of Bristol completed its storm drain and outfall mapping, and updated this information on its GIS. The Town also works with Mosaico CDC, STB, and SBH to coordinate a storm drain stenciling program. The GIS drainage mapping is available to these organizations, and is now used to identify storm drains for stenciling. The focus of the stenciling program has typically been on the downtown area with dense population close to Bristol Harbor and neighborhood elementary schools. The stenciling program has also been conducted in neighborhoods to the north of downtown and along Hope Street (Rt. 114), where drains discharge directly to Bristol Harbor or Silver Creek. Additional stormdrain markers were installed by STB in 2017. In the following permit year, the Town will evaluate additional needs for storm drain stenciling and marking to identify additional locations where it may be beneficial.

BMP ID 2-7 (Stencil a minimum of 25 storm drains per year in years 3, 4, and 5)

In previous permit years, community groups and school children marked numerous storm drains in the downtown areas surrounding Bristol Harbor and in neighborhoods along Hope Street (Rt. 114). In Year 12 (2015), approximately 40 stormdrains were marked in downtown Bristol by elementary school students with coordination by STB. STB installed several dozen new markers in the downtown area in Year 14 (2017); and undergraduate students from RWU earth science class installed stormdrain markers provided by STB and SBH within several outlying neighborhoods where discharges flow towards Silver Creek or Mt. Hope Bay. In the following permit year, the Town will evaluate additional needs for storm drain stenciling and marking to identify additional locations where it may be beneficial.

BMP ID 2-8 (Utilize GIS to identify town maintained shorelines and streams for cleanup and monitoring in 2<sup>nd</sup> year).

In Year 18 (2021), community groups and citizen volunteers participated in shoreline cleanup activities throughout town. The Town has not utilized its GIS to identify shoreline cleanup areas. However, the Town makes available its GIS based storm drain system maps to community organizations, such as STB and SBH, for use in prioritizing and tracking shoreline cleanup activities. Coastal cleanup data is available in GIS form with specific locations through the Ocean Conservancy website ([www.coastalcleanupdata.org](http://www.coastalcleanupdata.org)). The specific cleanup data for Bristol identifies cleanup participation between 80 and 171 individuals each year from 2017 and 2019, with 120 individuals participating in the Town's May 10, 2021 cleanup day which included many shoreline locations.

BMP ID 2-9 (Continue coordinating and hosting annual Earth Day events in years 3, 4, and 5)

In 2021, the Town of Bristol held its annual town-wide clean up on May 10<sup>th</sup>. Approximately 120 volunteers participated in this event and collected over 2, 700 pounds of refuse from 32 locations throughout the community.

**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? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	If YES, Date of Public Notice: <b>To be determined</b>
How was public notified: <input type="checkbox"/> List-Serve (Enter # of names in List: _____) <input checked="" type="checkbox"/> Newspaper Advertising <input type="checkbox"/> TV/Radio Notices <input checked="" type="checkbox"/> Town Hall posting <input checked="" type="checkbox"/> Website <input type="checkbox"/> Other: Enter Web Page URL: www.bristolri.gov	
Was public meeting held? <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____ Where: _____	
Summary of public comments received: <b>To be determined.</b>	
Planned responses or changes to the program: <b>To be determined.</b>	



**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:** Edward Tanner, Principal Planner, Department of Community Development

**Phone:** (401) 253-7000

**Email:** etanner@bristolri.gov

**Has this person received training on Illicit Discharge Detection and Elimination (IDDE)?** YES

**If yes, when and where?** Mr. Tanner has been the Town's stormwater coordinator for over 17 years. He has attended numerous training sessions presented by state and federal agencies as well as by private engineering consultants

**If no, who is trained on IDDE?** \_\_\_\_\_

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><b>Number of Outfalls Mapped within regulated area:</b> 163 Town; 28 State; 66 Private</p> <p><b>Percent Complete:</b> 100%</p> <p><b>If 100% Complete, Provide Date of Completion:</b> Mapping was completed in 2009; updated in 2014; and updated in 2019</p>
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The Town of Bristol completed its first GIS-based outfall map in Year 5 (2008). Prior to that the map was a "working document" that was being revised as plans and site surveys became available. In Year 6, the outfall map was field checked for accuracy by Town staff and volunteers from Save Bristol Harbor and the Mt. Hope High School senior marine science program as part of our outfall inspection and dry weather investigation program. The Town then revised the outfall map to include additional information collected during 2009 survey work, and further investigated a relatively small number of outfalls whose location could not be verified in the field. A total of 148 Town-owned outfalls were identified through the end of Year 6 (2009).

In Year 7 (2010), the Town contracted with an engineering consultant to field-verify and GPS locate our entire storm drainage system. This project included locating and inspecting every catch basin, manhole and outfall; in addition to determining drain pipe location, size, and direction of flow to complete a detailed storm drain GIS layer. A significant number of new drainage structures were identified through this effort, including 25 additional outfalls. A total of 173 Town-owned outfalls were identified at that time. The Town previously submitted maps depicting the locations of each outfall, along with a list of all Town-owned outfalls, including outfall identification number, location, and any previous inspection data with its Year 7 annual report.

In year 11 (2014), the Town revised its stormwater GIS layer and maps to incorporate recent drainage improvements, new development projects, and some miscellaneous field edits. These edits included the identification of one new Town-owned stormdrain outfall, bringing the total number of Town-owned outfalls to 174. Copies of revised stormwater system maps were submitted with our Year 11 annual report.

In Year 16 (2019), the Town again revised its stormwater GIS layer and maps to incorporate recent drainage improvements and miscellaneous field edits. These edits included the identification of several private and state owned outfalls that were previously identified as Town-owned. The total number of Town-owned outfalls was revised to 163. Copies of revised stormwater system maps were submitted with our Year 17 annual report. .

**ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd**

IV.B.3.b.2	Indicate if your municipality chose to implement the tagging of outfalls activity under the IDDE minimum measure, activities and actions undertaken under the 2021 calendar year.
As the Town continues to use GIS and GPS units to map outfall locations, this requirement is optional. The information used to create the GIS maps is of sufficient accuracy to allow the identification of individual pipes when revisiting their locations. Thus, the Town has not tagged its outfall pipes.	
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.
In 2010, the Town of Bristol completed the mapping and recording of all additional drainage system elements, including catch basins, manholes, and drain pipes. To accomplish this task, the Town contracted with an engineering consultant to accurately locate and inspect every catch basin, manhole, outfall, and other structure (such as detention basins and water quality units); in addition to determining drain pipe location, size, and direction of flow to complete a detailed town-wide storm drain map and GIS layer. The locating of these additional drainage system elements was completed with sufficient accuracy to allow for the revisiting of the location of these elements. Each drainage system element has been assigned a unique identification number and inspection notes have been recorded in a database linked to the GIS. The DPW uses the database and identification numbers of each element to track and map maintenance and repair activities. In year 11 (2014), the Town revised its stormwater GIS layer to incorporate recent drainage improvements, new development projects, and some miscellaneous field edits to the mapping. In Year 16 (2019), the Town again revised its stormwater GIS layer and maps to incorporate recent drainage improvements and miscellaneous field edits.	
IV.B.3.b.4	Indicate if the IDDE ordinance was <b>not</b> 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. <b>Date of Adoption:</b> October 8, 2008 If the Ordinance was amended in 2021, please indicate why changes were necessary.
The Town of Bristol developed and adopted an IDDE ordinance in 2008 (Chapter 13, Article VIII of Bristol Town Code). A copy of this ordinance was submitted to RIDEM on November 12, 2008 along with a letter from the Town Solicitor. This ordinance was not amended in 2021.	
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.
Throughout this permit cycle, the Department of Public Works and the Water Pollution Control Department worked together to investigate complaints or other evidence of potential illicit connections to the Town's drainage system. Complaints or direct observations by Town employees or consultants are investigated by the DPW and their sources identified and removed (if necessary). Priority areas for illicit discharge detection include the downtown district and industrial areas, and residential areas in the vicinity of the Town Beach. In 2021, the Town continued to investigate complaints when received. Any complaints and inspection actions are logged in a workflow database maintained by the DPW. The Town plans to continue this process of tracking complaints and enforcing the IDDE ordinance where necessary. If a non-storm water discharge is identified, the Town will follow the guideline set forth in the IDDE ordinance and if necessary refer the discharge to RIDEM for assistance.	
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. <b>Number of Catch Basins and Manholes Inspected for illicit connections/IDDE:</b> 3,425 <b>Percent Complete:</b> 100% <b>Date of Completion:</b> Permit Year 7 (2010)

**ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd**

The Department of Public Works is responsible for the implementation of this requirement. In 2010, the Town contracted with an engineering consultant to locate, inspect; and document the condition of every storm drainage system structure, including every catch basin and manhole to help identify potential illicit connections. A total of 2,884 catch basins and 541 manholes were located and inspected during 2010. In addition, in 2014 and again in 2019, the Town revised its stormwater GIS layer to incorporate recent drainage improvements, new development projects, and some miscellaneous field edits to the mapping. This information has been entered into a town-wide drainage system database that has been linked to the GIS, with each drainage structure having a unique identification number. This information has been utilized by DPW to improve its field inspection database and allow for the mapping of priority areas for additional cleaning, maintenance, and investigation. In addition, the Town's vacuum truck and its "clam shell" catch basin cleaner vehicle are used for cleaning catch basins and manholes. During cleaning, all catch basins are inspected for illicit connections by DPW staff. If suspected illicit connections are identified, they were investigated in the field by DPW staff. All catch basin cleaning and inspection information is maintained by DPW in an electronic database to track field inspections and document suspected illicit connections.

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. <b>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 sample results for those outfalls with flow. The EXCEL Tables <u>must</u> include a report of <u>all outfalls</u> and indicate the presence or absence of dry weather discharges.</b></p> <p><b>Number of Outfalls Surveyed Jan-Apr:</b> 185 (public and private) <b>Number of Outfalls Surveyed Jul-Oct:</b> 157 <b>Percent Complete:</b> 100% <b>Date of Completion:</b> October 2011</p>
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**ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd**

In 2011, the Town retained the services of private engineering consultants to complete two rounds of Dry Weather Surveys of all identified Town-owned outfalls. These surveys were conducted in April 2011 and October 2011, within the time frames specific in the Phase II Stormwater Regulations, and included field sampling and laboratory analysis as required for those outfalls found to be flowing. During the April 2011 (spring high groundwater) survey, a total of 157 outfalls were inspected and those having flow (59 total) were sampled and screened in the field for temperature, conductivity, and pH. As nearly all of Bristol is serviced by sanitary sewers, bacteria sampling is not required during the spring high groundwater survey. Results of the April dry weather survey investigation were submitted to RIDEM on July 19, 2011. During the October 2011 (fall low groundwater) survey, the Town's engineering consultant attempted to inspect a total of 185 publicly and privately owned outfalls. All identified outfalls were inspected and those having flow (60 total) were sampled and screened in the field for temperature, conductivity, and pH. In addition, samples from all flowing outfalls were collected for laboratory analysis for fecal coliform bacteria, surfactants, and ammonia as these parameters may indicate the presence of an illicit discharge. Of the 60 outfalls that were sampled and analyzed during the 2011 dry weather surveys, a total of seven (7) were considered to have a potential or suspect likelihood of an illicit discharge. Copies of dry weather survey investigation results, including the required EXCEL tables were submitted to RIDEM with our Year 8 (2011) report.

In 2012, the Town conduct additional survey and sampling work to further investigate those seven (7) outfalls identified in 2011 as having potential illicit discharges, as well as those Town-owned outfalls located within unsewered areas. Flowing outfalls were sampled and screened in the field for temperature, conductivity, and pH. In addition, samples from flowing outfalls were collected for laboratory analysis for fecal coliform bacteria, surfactants, and ammonia as these parameters may indicate the presence of an illicit discharge. Of the 11 outfalls surveyed on April 6, 2012, six (6) were found to be flowing and were sampled. Of these six samples, one (1) sample was found to contain elevated levels of contaminants that indicate the potential presence of an illicit discharge. The findings and results of this survey and sampling effort were submitted to RIDEM with our Year 9 (2012) report. In 2013, the Town conducted further investigation of the one suspect outfall (Outfall 113) and its connecting drainage system in an effort to identify potential illicit connections. This outfall discharges to the west branch of Silver Creek and is located south of Gooding Avenue and the Gooding Plaza shopping center parking lot. Storm drainage system components were inspected and samples were collected from the outfall, as well as from several manholes and catch basins during dry weather conditions in July and October 2013. This investigation identified elevated levels of Fecal Coliform Bacteria within samples collected from Outfall 113 and three interconnected drainage manholes. However, the levels of bacteria identified were within ranges of typical urban runoff and the investigation was not able to conclude if the bacteria were entering the drainage system from surface runoff or from an illicit connection to the drainage system. The findings and results of this investigation were submitted to RIDEM with our Year 10 (2013) report.

In 2015, the Town continued to investigate the source of bacteria identified at Outfall 113. The Town determined that there is a municipal gravity sanitary sewer line that is located in the area and that it crosses over the drainage lines that contribute to this outfall. In order to rule out the possibility of a cross connection between the drain and sanitary sewer lines, the Town's engineering consultant worked with a private contractor to conduct a closed circuit television (CCTV) inspection of drain lines contributing to Outfall 113 and the adjacent Outfall 112. This investigation did not identify any direct or indirect connections between the drain and sanitary sewer lines. The investigation did identify that the outfalls were partially clogged with sediment and vegetation which was not allowing water to flow freely. The consultant recommended that outfall area be cleared and that the drain pipes be cleaned as wildlife animal waste may be a potential source of the bacteria and that it may be breeding in standing water. A copy of the memorandum report detailing this investigation was submitted to RIDEM with our Year 12 (2015) report.

In 2016, the Town of Bristol removed sediment and debris from the area adjacent to Outfalls 112 and 113 to allow greater flow and to reduce the presence of standing water. The earth slopes adjacent to the outfalls were cleared and stabilized with geotextile fabric and rip rap. Follow up sampling and analysis of water discharging from outfall 113 in 2016 and 2017 showed elevated levels of Fecal Coliform Bacteria. However, in 2017, it was brought to the Town's attention that Gooding Avenue is a State-owned roadway, and that outfall 113 is owned and maintained by the Rhode Island Department of Transportation (RIDOT). In July 2019, Town staff met with representatives of RIDOT's Office of Stormwater Management to discuss stormwater management issues and areas of potential collaboration. During this meeting, the findings of sampling activities related to outfall 113 were also discussed. No further action has been taken by the Town in relation to outfall 113.

**ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd**

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.
<p>RIDOT owns and operates storm drain infrastructure along Metacom Avenue (Rt. 136) and Hope Street / Ferry Road (Rt. 114) as well as several connecting streets (Gooding Avenue, State Street). In numerous locations, the drains on these streets are interconnected with the Town's storm drain system. Bristol's DPW contacts RIDOT whenever a problem is identified with the State-owned system. Also, if requested by the State, the DPW will assist RIDOT with the cleaning of structures. In previous permit years, the Town has participated in an MS4 Coordination Group Exchange with RIDOT stormwater staff and other MS4 communities to discuss stormwater related issues of mutual interest and concern. The Town has also participated in discussions hosted by RIDOT and the University of Rhode Island T2 Transportation Center regarding municipal stormwater management. Topics of discussion included the RIPDES stormwater program, MS4 compliance, stormwater utilities, TMDL requirements, and the potential for greater collaboration on stormwater management between municipalities and RIDOT. In July 2019, Town staff met with representatives of RIDOT's Office of Stormwater Management to discuss stormwater management issues and areas of potential collaboration. The Town also shared GIS shapefile data with RIDOT to assist with identification of storm drain infrastructure. In 2021, Town staff met with engineering consultants working for RIDOT to discuss cooperation and cost sharing opportunities for municipal green infrastructure projects within specific areas of Bristol where RIDOT has focused stormwater management efforts. Though no specific projects were identified in these target areas, the Town intends to continue working with RIDOT to share information and coordinate efforts related to potential stormwater management projects and the maintenance of our interconnected systems.</p>	
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.
<p>The Department of Public Works is responsible for the implementation of this requirement. The Town adopted the IDDE ordinance in 2008. If a non-storm water discharge is identified, the Town will follow the guideline set forth in the IDDE ordinance and if necessary refer the discharge to RIDEM. No non-stormwater discharges were referred to RIDEM in 2021.</p>	
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.
<p>The Department of Community Development and the Department of Public Works are responsible for the implementation of this goal. The Town has adopted an IDDE ordinance (Chapter 13, Article VIII of Bristol Town Code). Notice of this ordinance was placed in the local newspaper and a televised public hearing was held where Town staff explained the rationale for the ordinance and problems associated with the improper disposal of wastes in stormwater. The Town also utilizes and assists private groups such as Save Bristol Harbor, Save the Bay, and Eastern Rhode Island Conservation District to educate residents and students about improper waste disposal and stormwater impacts. The Town web site includes stormwater pollution education information, including the IDDE ordinance. The Town also collects many waste items for proper disposal at its transfer station and coordinates annual hazardous waste collection days with Rhode Island Resource Recovery Corporation. The Town has also added additional waste disposal and recycling information to its website and provides brochures and other public education information within public buildings. The Town plans to continue these activities in the next permit year, and provide additional information to the public specifically focused on the topic of IDDE and improper waste disposal.</p>	

**ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd**

Additional Measurable Goals and Activities  
(BMP ID's correspond to Bristol's Phase II Storm Water Management Program Plan adopted in 2008)

BMP ID 3-9: (Develop a strategy for illicit discharge education)  
In 2008, the Town of Bristol adopted its IDDE ordinance and began researching for education materials to specifically inform the community about illicit discharge and improper disposal of waste (see discussion above). With assistance and information provided by RIDEM and URI NEMO storm water public education and outreach program, the Town plans to continue these activities and to partner with community groups to provide an education program with specific information to educate the public on IDDE and improper waste disposal. The Town has also added additional waste disposal and recycling information to its website and provides brochures and other public education information within public buildings.

BMP ID 3-4: (Inspect all town outfalls)  
In 2010, the Town contracted with an engineering consultant to field verify and GPS located our entire storm drainage system. This project included locating and inspecting every catch basin, manhole and outfall; in addition to determining drain pipe location, size, and direction of flow to complete a detailed storm drain GIS layer. A total of 173 Town-owned outfalls have now been identified. In Year 8 (2011), the Town complete two rounds of Dry Weather Surveys of all identified Town-owned outfalls. These surveys included sampling and analysis of all outfalls found to be flowing.

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

# of Illicit Discharges Identified in 2021: 0	# of Illicit Discharges Tracked in 2021: 0				
# of Illicit Discharges Eliminated in 2021: 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): 2	Total # of Illicit Discharges remaining unresolved at the end of 2021: 0				
Summary of Enforcement Actions: None during this 2021 reporting period.					
Total # of Outfalls identified and mapped to date: 163					
Total # of Interconnections with other MS4s identified and mapped to date: 18 (with RIDOT)					
Extent to which the MS4 system has been mapped (% complete): 100%					
Identify how the following components of the MS4 system have been mapped:	Not mapped	GIS	Auto CAD	Paper	Other (please specify)
Catch basins	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manholes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pipes, ditches, and other conduits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Flow direction and connectivity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Interconnections with other regulated MS4s	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MS4-owned stormwater controls (BMPs, not including catch basins or manholes)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Delineation of outfall catchment/drainage areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**ILLICIT DISCHARGE DETECTION AND ELIMINATION cont'd**

**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:
RIDOT	2010	Hope Street (Rt. 114)	RIDOT	Various Town-owned side streets	Contact RIDOT if maintenance is required or if illicit connections are detected.
RIDOT	2010	Metacom Avenue (Rt. 136)	RIDOT	Various Town-owned side streets	Contact RIDOT if maintenance is required or if illicit connections are detected.
RIDOT	2010	State Street	RIDOT	Metacom Avenue and various Town-owned side streets.	Contact RIDOT if maintenance is required or if illicit connections are detected.
RIDOT	2017	Gooding Avenue	RIDOT	Hope Street, Gooding Avenue and various Town-owned side streets	Contact RIDOT if maintenance is required or if illicit connections are detected.



**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 & Title:** Edward M. Tanner, Principal Planner, Department of Community Development

**Phone:** (401) 253-7000

**Email:** [etanner@bristolri.gov](mailto:etanner@bristolri.gov)

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:** January 25, 2006; amended January 23, 2008  
If the Ordinance was amended in 2021, 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 ordinance was adopted on January 25, 2006 and was amended on January 23, 2008 (Chapter 29 of Bristol Town Code). The amended ordinance was submitted to RIDEM on November 12, 2008 with a letter from the Town Solicitor. The ordinance was not amended in 2021.

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.

Complaints or comments are received by the Building Inspector, DPW staff, the Planning Department, or the Code Compliance Coordinator. All comments submitted by the public are follow up quickly and any site modifications or repairs to erosion/sediment controls that may be necessary are discussed with the site contact. In nearly all instances, Town staff members are aware of construction activities, as some type of permit is required, and site contact information is readily available. A file is maintained in the Department of Community Development for each permitted construction site and inspection and enforcement actions are noted within each file.

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.

The Town of Bristol did not use the assistance of RIDEM to enforce the Erosion, Runoff, & Sediment Control Ordinance in 2021.

Additional Measurable Goals and Activities  
BMP ID's correspond to Bristol's Phase II Storm Water Management Program Plan adopted in 2008)

BMP ID 4-8 (Track the number of non-compliant sites reported)  
Since the Soil Erosion, Runoff, & Sediment Control Ordinance was first adopted in 2006, we have inspected 100% of construction projects within the regulated area, including most small projects such as single-family house lots. Compliance inspections are performed by Town officials (Principal Planner, Building Inspector, DPW foreman, or Code Compliance Officer) and in many cases by a professional engineer consultant contracting with the Planning Board. Where non-compliant sites are found, the applicant's and/or contractors are notified and follow up inspections are performed to ensure compliance. All projects are inspected periodically, and significant inspection or enforcement issues are noted in the project's file.

**CONSTRUCTION SITE STORMWATER RUNOFF CONTROL cont'd**

**SECTION II. A - Plan and SWPPP/SESC Plan Reviews during Year 18 (2021), 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: 13 # of Construction Reviews Completed: 13 # of Permits/Authorizations Issued: 13	
Summary of Reviews and Findings, include an evaluation of the effectiveness of the program. The Town of Bristol reviewed 100% of plans and issued permits for construction projects resulting in land disturbance of greater than one acre (and many smaller projects including single-family house lots). In May 2017, the Planning Board adopted amendments to its Subdivision and Development Review Regulations that include revisions to align these regulations more closely with the Rhode Island Stormwater Design and Installation Standards Manual and to incorporate low impact development (LID) techniques for stormwater management (see Appendix F, Section I of these regulations.).  All plans for construction projects greater than one acre are reviewed by Town officials and in most cases also by a professional engineer consultant contracting with the Planning Board. A permit is issued for each project and files are maintained, including compliance inspections and follow up. In permit Year 18 (2021), the Town reviewed soil erosion, runoff and sediment control plans for 13 construction sites (nearly all of which were <b>less than one acre</b> ).  Identify person(s) /Department and/or parties responsible for the implementation of this requirement: This requirement is implemented by the Department of Community Development. Diane Williamson as Administrative Officer for the Planning Board; and Edward Tanner as Principal Planner review all applications and plans. If the development project requires review by the Planning Board (as most disturbances greater than one acre do) then plans and application materials are also reviewed by a private engineering consultant contracting with the Planning Board.  Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained": Diane Williamson and Edward Tanner are both professional planners with over two decades of experience and training reviewing site plans including SWPPP/SESC plans. They have attended numerous training sessions and workshops relating to stormwater management, pollution prevention, and erosion/sediment control. Consulting engineers retained by the Town to assist with Planning Board reviews are professional civil engineers specifically trained to design and review these types of plans.	

**SECTION II.B - Erosion and Sediment Control Inspections during Year 18 (2021), 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: 15	
# of Site Inspections: 30+	# of Complaints Received: 3
# of Violations Issued: 0	# of Unresolved Violations Referred to RIDEM: 0

**CONSTRUCTION SITE STORMWATER RUNOFF CONTROL cont'd**

Summary of Enforcement Actions, include an evaluation of the effectiveness of the program. The Principal Planner, Code Compliance Coordinator, Building Official, and DPW are responsible for implementing this requirement. All construction sites are inspected for erosion and sediment controls and compliance with permits. Approximately 30 site inspections were conducted in 2021, though many more informal "drive by" inspections occur by Town staff during routine operations. Several sites required compliance / enforcement and follow-up. In nearly all cases, compliance is accomplished with a phone call or personal conversation with the applicant or site contractor. If compliance is not accomplished by these means, a notice of inspection letter is sent to the applicant/property owner. No such letters was sent during this reporting period. No formal recorded violation notices were issued for erosion and sediment controls during this reporting period. A file is maintained for each construction project, including permits, plans, compliance inspection notes and follow up. However, the Town does not maintained this information in a tracking database. The Town is considering implementing a computer spreadsheet database program to specifically track the issuance of these permits, inspections, and compliance issues.

Identify person(s) /Department and/or parties responsible for the implementation of this requirement:  
This requirement is implemented primarily by Department of Community Development staff. Edward Tanner as Principal Planner and Ray Falcoa as Code Compliance Coordinator conduct inspections and follow up on any complaints received from the public and concerns noted by other Town employees such as the Building Official or DPW staff who are in the field and visiting construction sites frequently.

Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained":  
Edward Tanner is a professional planner, former conservation agent, and former environmental consultant with over two decades of experience and training with construction site erosion and sediment control inspections. Ray Falcoa has been the Town's Code Compliance Coordinator since 2013, and he has been trained by Town staff and consulting engineers in the use and inspection of proper soil erosion and sediment controls. In addition, in 2019, both Ray Falcoa and Edward Tanner completed the Level 1 Awareness Level Course of the Rhode Island Soil Erosion and Sediment Control Online Training program offered by RIDEM and RIDOT.



**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:** Edward M. Tanner, Principal Planner, Department of Community Development

**Phone:** (401) 253-7000

**Email:** etanner@bristolri.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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In 2021, the Town of Bristol reviewed all plans under the Town’s ordinances and regulations including Subdivision and Development Plan Review Regulations and the Soil Erosion, Runoff, and Sediment Control Ordinance. In most cases these regulatory mechanisms require the same design standards as State regulations. The Town’s Soil Erosion, Runoff, and Sediment Control Ordinance (Chapter 29 of Bristol Town Code) requires that if any approvals for a project that are received from Rhode Island Freshwater Wetlands permit or a Coastal Resource Management Council Assent contains provisions for erosion and sediment controls, that the approved site plan be a component of the overall soil erosion, runoff and sediment control plan. This ordinance includes provisions for post-construction stormwater management. In addition, in May 2017, the Planning Board adopted amendments to its Subdivision and Development Review Regulations that include revisions to align these regulations more closely with the Rhode Island Stormwater Design and Installation Standards Manual and to incorporate low impact development (LID) techniques for stormwater management (see Appendix F, Section I.).

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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In 2021, the Town of Bristol did not refer any new discharges of storm water associated with industrial activity to the State

IV.B.5.b.9	Indicate if the Post-Construction Runoff from New Development and Redevelopment Ordinance was <b>not</b> 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. <b>Date of Adoption:</b> October 28, 2009 If the Ordinance was amended in 2021, please indicate why changes were necessary. <b>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.</b>
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The post-construction stormwater management ordinance was adopted on October 28, 2009 as an amended to the Town’s Soil Erosion, Runoff and Sediment Control ordinance (Chapter 29 of Bristol Town Code). This ordinance was submitted to RIDEM on December 2, 2009 with a letter from the Town Solicitor. The ordinance was not amended during this reporting period. However, in May 2017, the Planning Board adopted amendments to its Subdivision and Development Review Regulations that include requirements for post construction operations and maintenance plans along with maintenance agreements between the property owner and the Town to ensure proper operation and maintenance of all structural best management practices (BMP) (see Appendix F, Section I.(2)(m) of these regulations).

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

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.
<p>In October 2009, the Town of Bristol adopted an ordinance that specifically regulates the maintenance of post-construction operation and maintenance of structural BMP's. The Department of Community Development and the Public Works Department have compiled an inventory of private stormwater BMP's installed prior to adoption of this ordinance based upon knowledge of private developments in the past 20+ years. The Town will inspect these locations and notify property owners of the need for proper operation and maintenance of their systems. The Town will also work with its solicitor to explore further regulatory mechanisms to require long-term O&amp;M of existing privately-owned BMP's.</p>	
<p>Additional Measurable Goals and Activities</p>	

**SECTION II.A. - Plan and SWPPP/SESC Plan Reviews during Year 18 (2021), 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.

<p># of Post-Construction Applications Received: 5          # of Post-Construction Reviews Completed: 5          # of Permits/Authorizations Issued: 2</p>
<p>Summary of Reviews and Findings, include an evaluation of the effectiveness of the program.          The Town of Bristol adopted its Soil Erosion, Runoff &amp; Sediment Control Ordinance in January 2006. Since that time, we have reviewed 100% of plans for post-construction BMP's at construction projects resulting in land disturbance of greater than one acre. We also review plans for many smaller commercial and residential projects where post-construction BMP's may be required. In May 2017, the Planning Board adopted amendments to its Subdivision and Development Review Regulations that include requirements for post construction operations and maintenance plans along with maintenance agreements between the property owner and the Town to ensure proper operation and maintenance of all structural best management practices (BMP) (see Appendix F, Section I.(2)(m) of these regulations). All plans for construction projects greater than one acre are reviewed by Town officials and in most cases also by a professional engineer consultant contracting with the Planning Board. A permit is issued for each project and files are maintained, including compliance inspections and follow up. In 2021, the Town reviewed plans for post-construction BMP's at five (5) sites greater than one acre in size. These sites included two residential subdivisions, one multi-family residential development, and two commercial developments. Plans for each of these projects were reviewed by Town staff and an engineering consultant retained by the Planning Board. Long-term maintenance agreements and easements are also reviewed by the Town Solicitor.</p>
<p>Identify person(s) /Department and/or parties responsible for the implementation of this requirement:          The Department of Community Development is responsible for the implementation of this requirement. Diane Williamson as Administrative Officer for the Planning Board and Edward Tanner as Principal Planner review all applications and plans. If the development project requires review by the Planning Board (as nearly all disturbances greater than one acre do) then plans and application materials are also reviewed by a private engineering consultant contracting with the Planning Board.</p>
<p>Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained":          Diane Williamson and Edward Tanner are both professional planners with over two decades of experience and training reviewing site plans including SWPPP/SESC plans. They have attended numerous training sessions and workshops relating to stormwater, pollution prevention, and erosion/sediment control. Consulting engineers retained by the Town to assist with Planning Board reviews are professional civil engineers specifically trained to design and review these types of plans.</p>

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

**SECTION II.B. - Post Construction Inspections during Year 18 (2021), 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: 2	# of Construction Projects Completed: 1
# of Site Inspections for proper Installation of BMPs: 6	# of Complaints Received: 0
# of Violations Issued: 0	# of Unresolved Violations Referred to RIDEM: 0

Summary of Enforcement Actions:  
The Town of Bristol inspects 100% of post-construction BMP's at development and redevelopment sites greater than one acre (and smaller) to ensure that they are constructed in accordance with the approved plans. In addition to periodic inspections by trained Town officials, these sites are inspected by professional engineer consultants contracted through the Planning Board. When deficiencies are found, the engineering consultants submit reports to the Town and these reports are maintained with each project file. Property owners and their contractor are notified of any deficiencies or violations and these are usually corrected after verbal or written notification from the Town. Final inspections are conducted prior to the release of all conditions, bonds, or Certificates of Occupancy. The regulatory mechanism used to achieve these inspections is the Planning Board's Subdivision & Development Review Regulations. Review and approval by the Planning Board under these regulations is required for all projects involving the subdivision of land and for nearly all other commercial, industrial or residential developments. The regulations require applicants to pay engineering review fees that include inspections by the Town's consultant. Post-construction inspections were conducted during this reporting period on two projects that were under construction on sites greater than one acre, including one commercial development and one residential subdivision.

Identify person(s) /Department and/or parties responsible for the implementation of this requirement:  
This requirement is implemented by the Department of Community Development. Diane Williamson as Administrative Officer for the Planning Board; and Edward Tanner as Principal Planner review all applications and plans and conduct periodic inspections of construction projects. If the development project requires review by the Planning Board (as most disturbances greater than one acre do) then construction projects are also inspected by a private engineering consultant contracting with the Planning Board.

Identify the type and date of training this person(s)/parties has/have received to be considered "adequately trained":  
Diane Williamson and Edward Tanner are both professional planners with over two decades of experience and training reviewing site plans including SWPPP/SESC plans. They have attended numerous training sessions and workshops relating to stormwater management, pollution prevention, and erosion/sediment control. Consulting engineers retained by the Town to assist with Planning Board reviews are professional civil engineers specifically trained to review stormwater management plans and conduct related inspections of construction sites.

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

**SECTION II.C. - Post Construction Inspections during Year 18 (2021), 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
<p>Summary of Activities and Enforcement Actions. Evaluate the effectiveness of the Program in minimizing water quality impacts. In October 2009, the Town of Bristol adopted its "post-construction" ordinance that specifically regulates the installation and maintenance of privately owned post-construction BMP's, including long-term operation and maintenance. In addition, in May 2017 the Planning Board adopted amendments to its Subdivision and Development Review Regulations that include requirements for post construction operations and maintenance plans along with maintenance agreements between the property owner and the Town to ensure proper operation and maintenance of all structural best management practices (BMP) (see Appendix F, Section I.(2)(m) of these regulations). Maintenance and inspections of privately owned structural BMP's are now required by written agreement with the Town. As for older structural BMP's, the Department of Community Development and the Public Works Department have compiled an inventory of privately owned BMP's based upon knowledge of private developments in the past approximate 20+ years. The Town will inspect these locations and notify property owners of the need for proper operation and maintenance of their systems. In addition, we will work with the Town Solicitor to review our existing regulations and ordinances to identify what regulatory mechanism might be available to compel private owners of older stormwater BMP's to properly maintain their systems and report this maintenance information to the Town.</p> <p>Identify person(s) /Department and/or parties responsible for the implementation of this requirement: The Department of Community Development is responsible for the implementation of this requirement.</p>	



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

**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:

Information materials have been distributed to all members of the Planning Board and discussed at meetings to assist in their understanding of LID practices and techniques.

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

The Department of Community Development and the Planning Board are responsible for reviewing submissions for LID

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

Diane Williamson as Administrative Officer for the Planning Board.

**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 2021, 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? \_\_\_\_\_

\_\_\_\_\_

**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 checked="" type="checkbox"/> YES <input 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 type="checkbox"/> YES <input checked="" 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:  
in May 2017 the Planning Board adopted amendments to its Subdivision and Development Review Regulations that include requirements for post construction operations and maintenance plans along with maintenance agreements between the property owner and the Town to ensure proper operation and maintenance of all structural best management practices (BMP) (see Appendix F, Section I.(2)(m) of the regulations). Long-term maintenance and inspections of privately owned structural BMP's are now required by written agreement with the Town.

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



**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:** Christopher Parella, Director of Public Works

**Phone:** (401) 253-4100

**Email:** [cparella@bristolri.gov](mailto:cparella@bristolri.gov)

IV.B.6.b.1.i	<p>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.</p> <p><b>Do you have an inventory of MS4-owned/operated BMPs?</b>      <input checked="" type="checkbox"/> YES                      <input type="checkbox"/> NO</p> <p><b>Total # of MS4-owned/operated BMPs</b> (does not include CBs or MHs): 46 individual sites</p>
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The Town of Bristol owns and operates structural BMP's connected to its roadway drainage system. These BMP's include detention/retention basins and ponds, swales, subsurface infiltration systems, and proprietary water quality structures. The vast majority of these structures were constructed in the past few decades as part of residential subdivisions. However, several have also been constructed by the Town in recent years as part of planned water quality improvement projects. In 2010, the Town contracted with an engineering consultant to field verify and GPS locate our entire storm drainage system. This project included locating and inspecting every catch basin, manhole, outfall and other structure (such as detention basins and water quality units); in addition to determining drain pipe location, size, and direction of flow to complete a detailed storm drain GIS layer. The locating and mapping of these drainage system elements was done with sufficient accuracy to allow for the revisiting of the location of these elements. Each drainage system element has been assigned a unique identification number and inspection notes have been recorded in a database linked to the GIS. In 2014 and again in 2019, the Town revised its stormwater GIS layer to incorporate recent drainage improvements, new development projects, and some miscellaneous field edits to the mapping. The DPW utilizes this database and the identification numbers of each element to track and map maintenance and repair activities. A list of each structural BMP located at 46 individual sites owned and operated by the Town, including specific locations and a description of each is included in Section II.A below.

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><b># of MS4-owned/operated BMPs inspected in 2021:</b> 8</p> <p><b># of MS4-owned/operated BMPs maintained/cleaned in 2021:</b> 3</p> <p><b># of MS4-owned/operated BMPs repaired in 2021:</b> 0</p> <p>Does your municipality/MS4 have a system for tracking:</p> <table style="width: 100%;"> <tr> <td>a. Inspection schedules of MS4-owned BMPs?</td> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td>b. Maintenance/cleaning schedules of MS4-owned BMPs?</td> <td><input type="checkbox"/> YES</td> <td><input checked="" type="checkbox"/> NO</td> </tr> <tr> <td>c. Repairs, corrective actions needed?</td> <td><input checked="" type="checkbox"/> YES</td> <td><input type="checkbox"/> NO</td> </tr> <tr> <td>d. Complaints?</td> <td><input checked="" type="checkbox"/> YES</td> <td><input 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?</p> <p><input checked="" type="checkbox"/> YES                      <input type="checkbox"/> NO</p>	a. Inspection schedules of MS4-owned BMPs?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	b. Maintenance/cleaning schedules of MS4-owned BMPs?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	c. Repairs, corrective actions needed?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	d. Complaints?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
a. Inspection schedules of MS4-owned BMPs?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO											
b. Maintenance/cleaning schedules of MS4-owned BMPs?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO											
c. Repairs, corrective actions needed?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO											
d. Complaints?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO											

**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

The Department of Public Works inspects detention/retention basins, storm sewer catch basins, and manholes as part of its routine inspections of MS4 components. In 2010, the Town contracted with an engineering consultant to locate, inspect; and document the condition of every storm drainage system structure, including every catch basin, manhole, outfall, and detention/retention basin. This location and inspection information has been entered into a town-wide drainage system database that is linked to the GIS, with each drainage structure having a unique identification number. This information is being utilized by DPW to improve its field inspection activities and allow for the mapping of priority areas for additional cleaning, maintenance, and investigation. In addition to regular maintenance of BMP's, the Town may retain a private contractor to assist with maintenance of larger BMP structures such as detention/retention basins. Routine BMP maintenance, including catch basin cleaning and the cleaning and flushing of interconnecting pipelines is tracked by DPW staff. In the following permit year, the Town of Bristol plans to continue routine inspections of drainage system components and to utilize the inspection database and GIS to prioritize any necessary cleaning and repairs to BMP components such as detention/retention basins.

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><b>Total # of CBs within regulated area (including SRPW and TMDL areas): 2,884</b></p> <p><b># of CBs inspected in 2021: 246    % of Total inspected: 8.5%</b></p> <p><b># of CBs cleaned in 2021: 246    % of Total cleaned: 8.5%</b></p> <p>Quantity of sand/debris collected by cleaning of catch basins: undetermined</p> <p>Location used for the disposal of debris: Bristol Transfer Station (former landfill) at Minturn Farm Road</p> <p>Do you use an electronic tool (e.g. GIS, database, spreadsheet) to track the inspections and cleaning of catch basins? <input checked="" type="checkbox"/> YES                    <input type="checkbox"/> NO</p>
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The Department of Public Works has implemented a town-wide catch basin inspection and cleaning program. Catch basins are inspected throughout the year by DPW employees and cleaned using a vacuum truck and/or "clam shell" catch basin cleaner. Emphasis for catch basin cleaning is on known problem areas such as those with flooding and/or those where outfalls have been identified with heavy sedimentation. In 2021 the DPW cleaned a total of 246 catch basins. DPW also focus a significant effort on the inspection and cleaning of pipelines and basin to basin hydrology connecting all catch basins that are cleaned. Each catch basin inspection/cleaning is documented on a log sheet that is recorded and maintained at the Department of Public Works. In addition, all catch basin cleaning and inspection information is input into an electronic database to track field inspections and document suspected illicit connections.

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 requirement.</p>
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The Department of Public Works routinely inspected public roadways for structural deficiencies, including erosion of road shoulders and roadside ditches. As the majority of the Town's roadways include a closed storm drainage system, erosion of road shoulders is not considered a significant widespread problem. However, on those roadways that are not served by a closed subsurface drainage system, stabilization of road shoulders and roadside ditches is accomplished by the installation of a bituminous asphalt berm to direct runoff away from problem areas, the placement of rip rap stone and/or gravel along the road shoulder, and/or the placement of loam and seed to stabilize the area.

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>
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**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

In 2021, the Town provided public education about littering through coordination with the schools and other community organizations. The Town's Keep Bristol Clean taskforce, operated by DPW, organizes an annual town-wide cleanup to remove litter. Trash receptacles are available and maintained by the Town in public areas throughout the downtown, the town common, public recreation areas, public transit bus stops, and at the town beach. In addition, many stormwater catch basins have been marked and fitted with hoods to reduce the amount of floatables within the system. In 2016, the Town of Bristol installed 15 "Sidewalk Buttler" receptacles for the collection and disposal of cigarette waste. Several of these receptacles remained in place throughout this permit period on existing sign posts and lamp posts throughout the downtown with the goal of reducing litter and limiting pollution within Bristol Harbor. Several others were removed as they were in need of repair and will be re-installed when feasible. Discarded cigarette butts not only litter sidewalks and roadways, but they are routinely washed into storm drains and enter our waterways, and are one of the most common items collected during local shoreline cleanups. The installation of these units was conducted in partnership with SBH, and included a public education campaign to inform the public about the water quality impacts from cigarette waste and the need for proper disposal. These receptacles are emptied regularly by Town staff. This program is reducing the amount of floatables entering Bristol Harbor from stormwater runoff. In 2018, the Town adopted an ordinance that prohibited single-use plastic bags from being supplied by local businesses. This ordinance went into effect in 2019 and quickly had a positive impact on the amount of plastic bags observed as litter throughout the community, as well as those identified in stormdrains and along shorelines and waterways. In fact, the Ocean Conservancy's website (<https://coastalcleanupdata.org/reports>) which tracks cleanup data collected by Save the Bay and other organizations found a 67% reduction in the number of plastic bags collected along the Bristol shoreline from the 2017-2018 average to 2019 (last year that data was retrievable).

IV.B.6.b.1.viii	<p>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.</p> <p>Do you have a system for tracking actions to remove and dispose of waste?    <input type="checkbox"/> YES    <input checked="" type="checkbox"/> NO</p>
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All wastes collected by DPW from roadway sweeping and catch basin cleaning operations are dewatered in a designated dewatering area at the Town's transfer station. The quantity of this waste collection is not measured or tracked as it is often mixed with water used with the vacuum truck and weights would not be considered accurate. Once dewatered, this waste material is mixed with other municipal waste for landfill disposal.

IV.B.6.b.2	<p>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.</p> <p>Does your MS4 have any salt piles, or piles containing salt, used for deicing?  <input checked="" type="checkbox"/> YES    <input type="checkbox"/> NO</p> <p>If yes:          Are these piles, covered to prevent exposure to rain, snow, snowmelt and/or runoff?  <input checked="" type="checkbox"/> YES    <input type="checkbox"/> NO</p> <p>If yes, check the type of cover used:  <input checked="" type="checkbox"/> Weatherproof permanent structure/shelter  <input type="checkbox"/> A temporary, secured, durable, waterproof covering (e.g., tarpaulin, polyethylene, polyurethane)</p> <p>Are these piles located on impermeable surfaces?  <input type="checkbox"/> YES    <input checked="" type="checkbox"/> NO</p>
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The Department of Public Works maintains their primary maintenance and storage facility at Mt. Hope Avenue. This property includes a municipal vehicle fueling facility, a municipal vehicle repair garage, vehicle storage, a salt storage building, and a vehicle washing facility. The Town's transfer station (closed and capped landfill), located off Minturn Farm Road is maintained by DPW, and it includes municipal waste storage and transfer facilities, vehicle storage, and a yard waste reclamation and composting facility. The Town's Wastewater Treatment Facility, located at Plant Avenue, includes the storage of chemicals used in the treatment of sanitary sewerage, and also includes vehicle storage facilities.

**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

<p>IV.B.6.b.4 and IV.B.6.b.5</p>	<p>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.</p>
<p>The Department of Public Works has developed and implemented a spill prevention and good housekeeping plan for their primary maintenance and storage facility at Mt. Hope Avenue. The plan was approved by RIDEM &amp; EPA and includes provisions for fuel storage, salt and sand storage, vehicle washing, and stormwater management. The plan was approved in March 2005. In 2006, the Town constructed a new vehicle washing building at the DPW facility. In 2003, the Town constructed a new 40ft.x80ft. salt storage building at this facility. In 2015, DPW installed a replacement floor drain system within its garage and vehicle washing buildings. This replacement drainage system was designed to meet EPA requirements as it includes oil/water separators, individual baffles to separate sediments and floatables, as well as “pig filters” to remove hydrocarbons prior to discharge to the municipal drainage system.</p> <p>The Town’s transfer station (closed and capped landfill), located off Minturn Farm Road, was constructed under the direction of RIDEM and includes a spill prevention and good housekeeping plan approved by RIDEM along with a stormwater management system specifically designed for the property’s use as a transfer station with appropriate water quality BMP’s.</p> <p>The Town’s Wastewater Treatment Facility, located at Plant Avenue, also has pollution prevention procedures in place to prevent the release of hazardous materials or other contaminants to the environment. This facility has a Stormwater Pollution Prevention Plan in place, and this plan was updated in 2019. In addition, the facility is inspected annually by RIDEM staff.</p>	
<p>IV.B.6.b.6</p>	<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? 0</p> <p>What was the date of the last training? N/A</p> <p>How many <i>municipal employees</i> have been trained in this reporting period? 0</p> <p>What percent of <i>municipal employees</i> in relevant positions and departments received stormwater management training? 0% in 2021; ~10% if including previous permit years.</p> <p>Have <i>municipal employees</i> that are responsible for inspecting or cleaning catch basins also been trained to detect and report illicit connections or non-stormwater discharges? Yes</p>
<p>All new DPW employees are trained on good housekeeping and spill prevention plan procedures to reduce storm water pollution from municipal operations. Municipal staff from the Departments of Community Development and Public Works have also attended URI NEMO trainings along with other training offered by RIDEM in previous permit years. These training programs have been effective in minimizing storm water pollution from municipal operations at DPW facilities and from equipment use throughout the town by municipal employees. In addition, members of Bristol’s all volunteer Fire Department — consisting of approximately 100 members — each receive training in oil and hazardous materials spill prevention and containment/cleanup before joining the department. Beyond this basic level of training, approximately 10 to 15 members of the fire department have received specialized training in hazardous materials spill response. Many municipal employees, including numerous DPW and Wastewater Department staff, are members of the Bristol Fire Department and receive this training.</p>	
<p>IV.B.6.b.7</p>	<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>

**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

The Town's reviews all proposed flow manage projects relating to areas with problematic flooding or drainage problems with representatives of the DPW, Department of Community Development, and consulting engineers. Any repairs to existing drainage structures or installations of new stormwater management structures are assessed for water quality impacts. If feasible and appropriate, structural BMP's or LID techniques are selected for a given location.

Additional Measurable Goals and Activities  
(BMP ID's correspond to Bristol's Phase II Storm Water Management Program Plan adopted in 2008)

BMP ID 6-4 (Sweep environmentally sensitive areas twice per year)  
The Department of Public Works currently conducts an annual road-sweeping program that includes all public roadways and parking areas. The town sweeps all streets twice per year and many within the downtown area are swept more often. The Town owns and operates two sweeping trucks to complete this task.

**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:
1	Patricia Anne Drive	Town of Bristol	Retention Basin	Annually
2	Elm Farm Road	Town of Bristol	Detention Basin	Annually
3	White Tail Drive	Town of Bristol	Detention Basin	Annually
4	Deer Run Road	Town of Bristol	Detention Basin	Annually
5	Quenton Lane	Town of Bristol	Detention Basin	Annually
6	St. Louis Avenue	Town of Bristol	Water Quality Unit	Annually
7	Sherman Avenue @ Everett Street	Town of Bristol	Water Quality Unit	Annually
8	Sandy Lane #1	Town of Bristol	Detention Basin	Annually
9	Sandy Lane #2	Town of Bristol	Detention Basin	Annually
10	Michael Drive @ Metacom Avenue	Town of Bristol	Subsurface Infiltration Units	Annually
11	Michael Drive (east end)	Town of Bristol	3 subsurface Detention Structures	Annually
12	Casey Drive	Town of Bristol	Detention Basin	Annually
13	Lisa Lane	Town of Bristol	Detention Basin	Annually
14	Anchorage Court	Homeowners Association	Detention / Infiltration Basins	Annually
15	Cox Court	Town of Bristol	Detention / Infiltration Basins	Annually
16	Tina Court @ Metacom Avenue	Town of Bristol	Detention Basin	Annually
17	Broadcommon Road	Town of Bristol	Sediment Forebay (2) and Vegetated Swales to Golf Course Duck Pond	Annually



**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

18	Ballou Boulevard	Town of Bristol	Sediment Forebay, Infiltration Areas and Vegetated Swales in Golf Course	Annually
19	Town Beach Parking Lot	Town of Bristol	Vegetated Swale and detention basins (2)	Annually
20	Town Beach at Brookwood Rd	Town of Bristol	Gravel Wet Vegetated Treatment System	Annually
21	Hillside Road	Town of Bristol	Rip Rap & Vegetated swale	Annually
22	Hamlet Court	Town of Bristol	Detention Basin	Annually
23	Liberty Lane	Town of Bristol	Detention / Infiltration Basin	Annually
24	Varnum Avenue	Town of Bristol	Detention Basin	Annually
25	Elbow Street	Town of Bristol	Vegetated Swales	Annually
26	Highview Drive	Town of Bristol	Detention Basin	Annually
27	Fransesca Lane	Town of Bristol	Water Quality Inlet and Vegetated Swale	Annually
28	48 Viking Drive	Town of Bristol	Water Quality Unit	Annually
29	54 Viking Drive	Town of Bristol	Water Quality Unit	Annually
30	Portside Drive	Town of Bristol	Rip Rap Swale	Annually
31	West Harbor Road	Town of Bristol	Vegetated Swales	Annually
32	Sandra Court	Town of Bristol	Detention Basin	Annually
33	State Street	Town of Bristol	State Street Reservoir Retention Area and Vegetated Swales	Annually
34	Minturn Farm Road	Town of Bristol	Transfer Station BMP's swales and water quality units.	Annually
35	Vanwickle Lane	Town of Bristol	Vegetated Swales and Infiltration Basin	Annually
36	Annawamscutt Drive at Fire and Rescue	Town of Bristol	Detention / Infiltration Basins	Annually
37	Kickemuit Avenue right off way	Town of Bristol	Sediment Forebay and Settling Basin	Annually
38	Guiteras School Washington Street	Town of Bristol	Bioretention Basins and Swales	Annually
39	Butterworth Avenue right of way	Town of Bristol	Sediment Forebay and Settling Basin	Annually
40	San Miguel Drive right of way	Town of Bristol	Sediment Forebay and infiltration Area	Annually
41	Howe Street	Town of Bristol	Inlet in cul de sac, sediment forebay and infiltration basin	Annually
42	Garfield Court	Town of Bristol	Vegetated Swale from roadway cul de sac and Detention Basin	Annually

**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

43	Lugent Lane (east end)	Town of Bristol	Rip Rap & Vegetated swales	Annually
44	Cortland Lane	Town of Bristol	Vegetated Swale and Detention Basin	Annually
45	Sheraton Road	Town of Bristol	Swale and Pipe Inlet	Annually
46	Elmwood Drive (end or road)	Town of Bristol	Stone swales	Annually

**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:

Outfall inspection logs, including information on scouring and sedimentation was submitted with the Town's Year 8 (2011) Annual Report. No additional inspection information was prepared for 2021.

**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 of Bristol is proactive in its approach to identifying, studying, and implementing water quality and flood mitigation projects that benefit the community and the greater Narragansett Bay watershed. Below is a summary of example projects being planned or implemented in 2021:**

In 2020, the Town completed a stormwater management master plan for the Mt. Hope High School property. This property was developed in the early 1960's and is bisected by the east branch of Silver Creek. This study, conducted with funding assistance from the Narragansett Bay Estuary Program and SNEP, identified several areas where stormwater management BMP's and LID techniques could be implemented to improve water quality and runoff into the Silver Creek watershed from the school property. The Town continues to evaluate identified potential projects for implementation and funding. More information can be found at this link: <https://www.bristolri.gov/departments/community-development/community-development-projects/>

Beginning in 2018, the Town has continued work on a water quality and habitat restoration project at the Bristol Golf Course. This recreational property lies that the headwaters of the Silver Creek watershed and also the watershed of an unnamed stream flowing to Jacobs Point in Warren. Construction of the golf course restoration project was designed and permitted in 2019 and construction began in 2020 with funding assistance from the EPA Southeast New England Program (SNEP) Watershed Grant Program and RIDEM's Section 319 Non-point Source Program. Construction continued throughout 2021 with additional funding assistance provided by the Rhode Island Infrastructure Bank (RIIB) Municipal Resilience Program (MRP) Action Grant. This project included stormwater structural BMP's as well as LID techniques, and included a robust public engagement and education program including planning and habitat restoration assistance from STB and SBH volunteers. More information can be found at this link: <https://www.bristolri.gov/departments/community-development/community-development-projects/>

In 2021, the Town completed working with CRMC and the URI Coastal Resources Center, as part of the RI Shoreline Adaptation Inventory and Design program, to design a stormwater retrofit at the end of Sunrise Drive at Mount Hope Bay (TMDL water body). The Town is now seeking funding for construction of this project.

In 2021, the Town began design of four (4) additional "end of road retrofit" projects at Portside Drive, Sherman Avenue, Narrows Road, and Annawamscutt Drive. With the exception of Portside Drive, these locations are near the shore of the Kickemuit River and Mount Hope Bay (both TMDL waterbodies). The goal of these project is to

**POLLUTION PREVENTION AND GOOD HOUSEKEEPING IN MUNICIPAL OPERATIONS cont'd**

improve water quality from stormwater discharges flowing into coastal waters by the use of structural BMP's, while also maintaining public access to the shore.

Beginning in 2017, and continuing through 2020, the Town worked to design and permit water quality improvements at the Tanyard (a.k.a. State Street) Reservoir property on State Street. This project, with funding assistance from the RIDEM Section 319 Non-point Source Program and the Bay and Watershed Restoration Fund, includes LID techniques to improve stormwater management, water quality and habitat improvements, and increased flood storage capacity at the Town-owned reservoir property. Permits were received and construction commenced on this project in 2021. We anticipate completion in 2022.

In 2021, the Town completed public outreach and design work on a stormwater management master plan for the Bristol Town Common. This project was funded and conducted with input and oversight from the SNEP Network. The design includes landscape improvements and LID techniques to reduce runoff and improve water quality in stormwater flow from the Town Common into Bristol Harbor. More information can be found at this link: <https://www.bristolri.gov/departments/community-development/community-development-projects/>

In 2021, the Town began design work on drainage and stormwater management improvements within the Foxhill Avenue neighborhood. This area, located within the Tanyard Brook watershed, has experienced a history of chronic flooding and poor drainage. The Town is investigating LID and subsurface infiltration techniques along with enhanced drainage infrastructure to improve conditions within this area.

**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).**

In 2021, trained volunteers from Save Bristol Harbor continued water quality sampling and testing at 15 sites located within Bristol Harbor and its tributary, Silver Creek. Samples are also collected from three locations on the easterly side of Bristol within the Kickemuit River and Mt. Hope Bay (each TMDL affected areas). Surface water samples are collected from these locations bi-weekly from April through October and analyzed in the field for a variety of parameters. In addition, samples are collected monthly from each location and delivered to URI for laboratory analysis. This valuable work – now in its 13<sup>th</sup> year – helps the Town, other government agencies, and the public further understand water conditions in the harbor and guide decision making within the watershed. In 2021, the Town of Bristol contributed funds to support SBH's efforts by paying for the cost of laboratory analysis for eight (8) of these sampling locations. See **attached** sampling report from URI documenting 2009-2021 monitoring results or visit <https://www.savebristolharbor.com/> for more information.



# 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:** Edward Tanner, Principal Planner

**Phone:** (401) 253-7000 x128

**Email:** [etanner@bristolri.gov](mailto:etanner@bristolri.gov)

LIST OF IMPAIRED WATERS:				
Impaired Water Body: Kickemuit River  WBID: RI0007033E-01	Pollutants Causing Impairments:  Fecal Coliform	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Impaired Water Body: Mount Hope Bay  WBID: RI0007032E-01	Pollutants Causing Impairments:  Fecal Coliform	Has TMDL been completed? Has MS4 been notified of TMDL requirements? Has MS4 developed a Scope of Work or TMDL Implementation Plan?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
[add as necessary]				
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: Fecal Coliform	Strategy: pamphlets about pest waste, lawn maintenance, and dumping pollutants into stormdrains	Target Audience: local residents		
Has the MS4 installed stormwater BMPs or required the installation of stormwater BMPs on private property to address impairments? <input checked="" type="checkbox"/> YES <input type="checkbox"/> 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 Kickemuit River	Type of Stormwater Control: Structural BMP, sediment forebay and infiltration area at end off Kickemuit Avenue.	Date Installed: July 2014	<input checked="" type="checkbox"/> Municipally Owned <input type="checkbox"/> Privately Owned	Who maintains it? Town of Bristol
Impaired water body Kickemuit River	Type of Stormwater Control: Structural BMP, sediment forebay and infiltration area at end of San Miguel Drive	Date Installed: November 2020	<input checked="" type="checkbox"/> Municipally Owned <input type="checkbox"/> Privately Owned	Who maintains it? Town of Bristol
Impaired water body Kickemuit River	Type of Stormwater Control: Structural BMP, sediment forebay and infiltration swale at end of Butterworth Avenue	Date Installed: November 2020	<input checked="" type="checkbox"/> Municipally Owned <input type="checkbox"/> Privately Owned	Who maintains it? Town of Bristol

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

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.):

Two coastal water bodies that border Bristol, the Kickemuit River and Mt. Hope Bay, are listed in the 2008 303(d) Impaired Waters list. The Town has identified discharges from our MS4 to these waters, and has included these discharges in our Phase II Stormwater Program. Outfalls in these areas have been inspected, and all contributing drainage systems have been mapped. Dry weather screening of each of these outfalls has been conducted by the Town, and the information has been included with previous annual reports. The Town has worked proactively with RIDEM and the USEPA on a Sump Pump Disconnection Program Pilot Study to eliminate sump pump discharges to sanitary sewer lines within a portion of the Mt. Hope Bay watershed to limit the potential for overflows and untreated discharge during heavy precipitation events. In addition, the Town has installed three "end of road retrofits" to improve the quality of stormwater flowing Town roadways and discharging into the Kickemuit River. These retrofit projects, located at Kickemuit Avenue, San Miguel Drive, and Butterworth Avenue, each include structural BMP's to capture and treat stormwater. A fourth "end of road retrofit" has been designed for the end of Sunrise Drive to improve the quality of stormwater runoff discharging to Mount Hope Bay; and the Town is currently seeking funding for construction. In addition, three other "end of road retrofit" are being designed in 2021 for Sherman Avenue, Narrows Road, and Annawamscutt Drive. Each of these locations are adjacent to the shoreline of the Kickemuit River or Mount Hope Bay.



## SPECIAL RESOURCE PROTECTION WATERS (SRPWs)

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**SECTION I.** In accordance with §1.32(A)(5)(a)(7) of the *Regulations for the Rhode Island Pollutant Discharge Elimination System* (RIPDES Regulations), 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 §1.32(G)(5)(c). A list of SRPWs can be found in §1.28 of the *RIDEM Water Quality Regulations* at this link: [Water Quality Regulations \(250-RICR-150-05-1\) - Rhode Island Department of State](#)

The 2018-2020 303(d) Impaired Waters Report can be found here: [iwr1820.pdf \(ri.gov\)](#)

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 Town of Bristol does not contain any Special Resource Protection Waters (SRPWs). Thus, there are no discharges from our MS4 to any SRPWs.



# RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Office of Water Resources



## INSTRUCTIONS FOR THE RI POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES)

### SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS AND INDUSTRIAL ACTIVITY AT ELIGIBLE FACILITIES OPERATED BY REGULATED SMALL MS4s ANNUAL REPORT FORM

#### **WHO MUST SUBMIT AN ANNUAL REPORT:**

Owners/Operators of regulated small municipal separate storm sewer systems (MS4s) and industrial activities authorized to discharge stormwater under the Rhode Island Pollutant Discharge Elimination System (RIPDES) Stormwater General Permit for Small Municipal Separate Storm Sewer Systems and Industrial Activity at Eligible Facilities Operated by Regulated Small MS4s (hereafter referred to as "the General Permit"), must submit an Annual Report, outlined in Part IV.G of the permit. The Report must be submitted each year after permit issuance **by March 10<sup>th</sup>** to track progress of compliance. If you have questions regarding this Annual Report Form contact Jennifer Stout of the Rhode Island Department of Environmental Management (RIDEM), Office of Water Resources, Permitting Section at (401) 222-4700 ext. 277726.

The Annual Report must be submitted to:

RIDEM Office of Water Resources  
RIPDES Program  
Permitting Section  
235 Promenade Street  
Providence, RI 02908  
ATTN: Jennifer Stout

#### **INSTRUCTIONS FOR COMPLETION:**

##### ***GENERAL INFORMATION PAGE:***

###### ***"RIPDES Permit #"***

Include your permit ID # to ensure proper tracking.

###### ***"Operator of MS4"***

Give the legal name of the person, firm, public (municipal) organization, or any other entity that is responsible for day-to-day operations of the MS4 described in this application (as defined in Title 250 RICR-150-10-1 ("RIPDES Regulations") §§1.3 and 1.12). Enter the complete address and telephone number of the operator. Circle the appropriate choice to indicate the legal status of the operator of the MS4.

###### ***"Owner of MS4"***

If the owner is the same as the operator do not complete this section. Give the legal name of the person, firm, public (municipal) organization, or any other entity that owns the MS4 described in this application (RIPDES Regulations §§1.3 and 1.12). Do not use a colloquial

name. Enter the complete address and telephone number of the owner.

###### ***"Certification"***

State and federal statutes provide for severe penalties for submitting false information on this application form. State and federal regulations require this application to be signed as follows (RIPDES Regulations §1.12);

*For a corporation:* by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information or permit application requirements; and where authority to sign documentation has been assigned or delegated to the manager in accordance with corporate procedures;

*For a partnership or sole proprietorship:* by a general partner or the proprietor;

*For a Municipality, State, Federal or other public site:* by either a principal executive officer or ranking elected official.

##### ***SECTION I- OVERALL EVALUATION OF BMPS AND MEASURABLE GOALS:***

One or more pages, front and back, are provided to report on the status of measurable goals which have been developed to aid in the implementation of strategies, procedures, and programs used to achieve each of the six minimum control measures in Part IV.B of the General Permit. This section provides narrative space for a descriptive explanation and evaluation of the actions taken to satisfy each of the minimum control measures for the 2021 calendar year. Please type or print. If additional space is needed, modify as necessary. Please submit attachments to the appropriate minimum control measure following the format provided.

A Permit ID # has been provided, which refers to the part of the permit where you can find a listing or description of the required measurable goal.

Please provide a general summary of actions taken (implementation of BMPs, development of procedures, events, etc.) to meet the measurable goals of the minimum measure. **Be sure to identify parties responsible for achieving each measurable goal** and reference any reliance on another entity for achieving any measurable goal. **Mark with an asterisk (\*) if this person/entity is different from last year.**

Describe whether each measurable goal was completed within the time proposed in the General Permit or your Stormwater Management Program Plan (SWMPP). Why or why not? Provide a progress report and discussion of activities that will be carried out during the next reporting cycle to satisfy the requirements of the minimum measures. If applicable, assess the appropriateness of the actions taken to meet the requirements of the minimum measure. In determining appropriateness, you may want to consider at a minimum the local population targeted, pollution sources addressed, receiving water concerns, integration with local management procedures, and available resources and violations or environmental impacts eliminated or minimized.

Also, discuss the effectiveness of the implementation of BMPs to meet the requirements of the minimum measure and the overall effectiveness of the minimum measure. Describe your progress towards achieving the overall goal of reducing the discharge of pollutants. Please include assessment parameters/indicators used to measure the success of the minimum measure. Also include a discussion of any proposed changes to BMPs or measurable goals.

After evaluation, it may be necessary to make changes or modifications to your Implementation Schedule if the time frame, appropriateness or effectiveness cannot be assured. If so, please include descriptions of changes or modifications, and detailed justification in the appropriate sections.

## **SECTION II- ADDITIONAL ANNUAL REPORT REQUIREMENTS**

Section II refers to additional reporting requirements that the General Permit requires to be submitted to the Department as part of the Annual Report. Section II requirements apply to Minimum Control Measures 2 through 6.

**Minimum Control Measure #2: Section II:**  
Specify the date of and how the annual report was public noticed. If a public meeting was needed, provide the date and place. Include a summary of public comments received

in the public comment period of the draft annual report and planned responses or changes to the program (new or revised BMP's and measurable goals, partnerships, etc.). Be sure to attach a copy of your public notice (Parts IV.G.2.h and IV.G.2.i) to the Annual Report.

**Minimum Control Measure #3: Section II.A:**  
Provide the number of illicit discharges identified in 2021, number of illicit discharges tracked in 2021, number of illicit discharges eliminated in 2021, complaints received, complaints investigated, violations issued and resolved with a summary of enforcement actions, number of unresolved violations that have been referred to RIDEM, the total number of illicit discharges identified to date, and the total number of illicit discharges remaining unresolved at the end of 2021. Include a short narrative describing the extent to which your system has been mapped (Part IV.G.2.m), and the total number of outfalls identified to date.

**Minimum Control Measure #3: Section II.B:**  
List identified MS4 interconnections, including location, date found, operator of the physically interconnected MS4, and originating source of newly identified physical interconnections with other small MS4s. Also note any planned or coordinated activities with the physically interconnected MS4 (Part IV.G.2.k and IV.G.2.l).

**Minimum Control Measures #4 & 5: Section II.A:**  
Identify the number of construction and post-construction plan and SWPPP/SESC Plan reviews completed during Year 18 (2021) and any additional information. This includes, but is not limited to a summary of the reviews, responsible parties, and types of projects reviewed.

**Minimum Control Measure #4: Section II.B:**  
Construction inspection information for erosion and sediment control should be submitted annually as stated in Part IV.G.2.n. Provide a summary of the number of site inspections conducted, inspections that have resulted in enforcement actions, violations that have been resolved and of those unresolved, referred to RIDEM.

**Minimum Control Measure #5: Section II.B:**  
Post-construction inspection information for proper installation of post-construction structural BMPs should be submitted annually as stated in Part IV.G.2.o. This should provide a summary of the number of site inspections conducted, inspections that have resulted in enforcement actions, violations that have been resolved and of those unresolved, referred to RIDEM.

**Minimum Control Measure #5: Section II.C:**  
Inspection information for proper operation and maintenance of post-construction structural BMPs should be submitted annually as stated in Part IV.G.2.p. This should provide a summary of the number of site inspections conducted, inspections that have resulted in



enforcement actions, violations that have been resolved and of those unresolved, referred to RIDEM.

Minimum Control Measure #6: Section II.A:

As prescribed in Part IV.B.6.b.1.i of the General Permit, the MS4 operator must identify and list the specific location and description of all structural BMPs in the SWMPP at the time of application and update the information in the annual report.

Minimum Control Measure #6: Section II.B:

Part IV.B.6.b.1.v of the General Permit states to identify and report annually, as part of the annual report, known discharges causing scouring at outfall pipes or outfalls with excessive sedimentation. Include Outfall ID #, location, description of the problem, any remediation taken, and the ultimate receiving water body.

Minimum Control Measure #6: Section II.C:

As noted in Part IV.G.2.j of the General Permit, specify any planned municipal construction projects or opportunities to include water quality BMPs, low impact development, or seek to promote infiltration and recharge.

Minimum Control Measure #6: 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, including, but not limited to, dry weather survey data (Part IV.G.2.e).

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

Section I:

Complete this section only if your MS4 is subject to an approved TMDL. TMDL requirements may require the implementation of the six minimum control measures to address the pollutants of concern, and/or additional structural stormwater controls or measures that are necessary to meet the provisions of the approved TMDL. Be sure to identify the approved TMDL and assess the progress towards meeting the requirements for the control of stormwater (Part IV.G.2.d).

Provide a progress report on the present status and discussion of activities that have been accomplished or will be carried out during the next reporting cycle to satisfy the requirements of the TMDL. If applicable, assess the appropriateness of the BMPs selected under each of the six minimum control measures to meet the requirements of the TMDL. In determining appropriateness, you may want to consider violations or environmental impacts eliminated or minimized.

Please include assessment parameters/indicators that will be used to measure the success of the selected BMPs. Also include a discussion of any proposed changes to BMPs or measurable goals.

### **SPECIAL RESOURCE PROTECTION WATERS (SRPWs)**

Section I:

Complete this section only if your MS4, located outside Urbanized Areas or Densely Populated Areas, discharges to:

a SRPW as listed in §1.28 of the *RIDEM Water Quality Regulations* at this link:

[Water Quality Regulations \(250-RICR-150-05-1\) - Rhode Island Department of State](#)

or

an impaired water body including water bodies with no approved TMDL as listed in the *2018-2020 303(d)*

*Impaired Waters Report* at this link: [iwr1820.pdf \(ri.gov\)](#)

In accordance with §1.32(A)(5)(a)(7) in the *Regulations for the Rhode Island Pollutant Discharge Elimination System* (RIPDES Regulations), MS4s were required to incorporate any discharges to these waterbodies into their MS4 Program on or after March 10, 2008 unless a waiver has been granted in accordance with §1.32(G)(5)(c).

Provide a progress report on the present status and discussion of activities that have been accomplished or will be carried out during the next reporting cycle to incorporate these areas into the MS4's Phase II Stormwater Program.