

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

Part II. Self-Assessment

The Town of Exeter has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, with the possible exception of the following provisions:

Part 1 C. Discharges to Water Quality Impaired Waters

1. The permittee must determine whether stormwater discharges from any part of the MS4 contribute; either directly or indirectly, to a 303(d) listed water body.
2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. This discussion must specifically identify control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.

The Exeter wastewater treatment facility (WWTF) permit imposed stringent discharge limits on nitrogen. The permit requires: development of total nitrogen non-point source (NPS) and point source accounting system; a nitrogen control plan be developed by 2018; a description and accounting of the activities by the town as part of its nitrogen control plan; and description of activities conducted which affect nitrogen in these rivers.

The town participated in a Water Integration for the Squamscott and Exeter Rivers (WISE) study over the past several years, which addresses some of the issues required by the WWTF permit. Officials from the Towns of Exeter, Stratham, and Newfields worked with a team from Geosyntec Consultants, the University of New Hampshire (UNH), Rockingham Planning Commission, Consensus Building Institute and the Great Bay National Estuarine Research Reserve to develop the study.

Information presented in the final WISE report (December 2015) is currently being used to develop water quality improvement strategies for the largest urbanized watershed in the town. Waterstone Engineering was awarded a contract to perform work under an NH Department of Environmental Services (NHDES) 319 Nonpoint Source Grant to evaluate the Lincoln Street watershed and provide recommendations for water quality improvements.

The WISE project:

- Estimated baseline stormwater nitrogen loads for the town
- Determined the most cost-effective BMP's for load reductions
- Established continuing water quality monitoring plans for the river
- Analyzed and mapped septic systems within 200 meters of major streams
- Estimated substantial budget increases to the town for implementation
- Obtained tentative approval for fulfilling the required 2018 Nitrogen Control Plan

The town is also participating in the Great Bay Pollution Tracking and Accounting Pilot Program (PTAPP) coordinated by NHDES. The purpose of PTAPP is to enable coordination on nitrogen tracking and accounting for

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

the Great Bay region. The Town developed an accounting worksheet to track land use, which is being incorporated into the PTAPP program. The PTAPP program is expected to publish the first draft of their tracking and accounting program in spring of 2017.

The Town retained Wright-Pierce, Inc. to evaluate the Stormwater Management Program, Town Ordinances, Town Regulations, and IDDE program and provide recommendations to meet the 2017 MS4 permit. Several memoranda were prepared which identified recommended actions for short- and long-term stormwater program improvements. The Town also worked with Wright-Pierce to develop a presentation that compared the 2003 permit requirements to the 2017 permit requirements and the WWTF permit requirements. This presentation will be made to the Board of Selectmen in April 2017.

The Exeter River had an impounded reach within the town that is listed on the 2012 303(d) list of impaired waters. The dam was removed in the summer of 2016 and the river was restored to fully support designated uses of Aquatic Life Use support and Primary Contact Recreation. Additionally, without the impoundment, the river will be free of water quality impediments to fish migration and will be allowed to return to a state of geomorphic equilibrium. Ultimately, the river within Exeter will have dissolved oxygen concentrations sufficient for maintaining aquatic life and chlorophyll a, and bacteria concentrations that do not pose a risk for primary contact recreation. A monitoring plan was developed with the NH Fish and Game (NHFG), NH Department of Environmental Services (NHDES), and National Oceanic and Atmospheric Administration (NOAA) that will monitor river conditions and fish passage for up to five years.

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NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

PUBLIC EDUCATION & OUTREACH

BMP #1 DISPLAY AT ALEWIFE FESTIVAL

The festival no longer takes place.

ADDITIONS

The Exeter Conservation Commission (ECC) led volunteers in a clean up of the Exeter River in July 2016 after water levels were lowered for removal of the Great Dam. Approximately 20 people participated in the event which removed debris from the riverbed and banks. (attachment)

BMP #2 STENCIL STORM DRAINS

All catch basins in town were stenciled or touched up with the message “Attention – Drains to Local Waterway” as needed.

BMP #3 STORMWATER VIDEO ON LOCAL PUBLIC STATION

No videos were played on the local public station; however, the Town has the following educational videos on the town website: “Stormwater Rubber Duck” PSA; “Devil Duck Lawn Care” PSA; “Rain Storm” Radio Ad; and, “Car Wash” Radio Ad.

The Conservation Commission and River Study Committee meetings provide information regarding the local stormwater program and are televised. The stormwater education program “Think Blue Exeter” is a subcommittee of the River Study Committee, so their activities are presented during these televised meetings. Also, the Board of Selectman’s televised meetings included presentations about the Draft 2013/2015 MS4 Phase II permit.

BMP #4 DISPLAY AT TOWN BUILDING

Permanent educational signs: Stream buffer at a popular local park. This display is located adjacent to the Squamscott/Exeter Rivers and highlights how rain garden and stream buffers functions can improve water quality.

During the month of September, a “Smart Septic” display was located at the town office, along with handouts. The display addressed proper septic system construction and maintenance. (attachment)

ADDITIONS-

Town Website and Facebook pages –

- Think Blue Exeter – general stormwater education, water quality in Exeter’s streams & rivers, simple changes to reduce stormwater pollution. (attachment)
- Drug Take Back Day – Exeter Police Department participates in National Drug Take Back Day, which allows residents to drop off household and prescription drugs at the police department to prevent improper disposal.

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

- Drug Drop-Off Box – Exeter Police Department – The Exeter Police Department has taken a step further to help protect our waterways by providing a safe, sustainable and secure method to dispose of unwanted and/or expired household and prescription medications by installing a secure container in the lobby of the Police Department. (attachment)
- Household Hazardous Waste Collection Day – Exeter continues to host the once per year collection of household hazardous waste. The collection is coordinated by the Rockingham Planning Commission and includes Exeter and six other communities. (attachment)
- Announcements for Spring 2016 and Fall 2016 leaf collection, and January 2017 Christmas tree pickup. Each Town resident was permitted to have twelve bags of leaves picked up for free in the spring and fall 2016. The leaves were distributed to a compost pile and residents are allowed to use the compost. (attachment)

Newspaper Articles –

- Announcements for Spring 2016 and Fall 2016 leaf collection and January 2017 Christmas tree pickup.
- Announcements for Household Hazardous Waste Collection Day and Drug Take-Back Day.

PUBLIC PARTICIPATION

BMP #5 PUBLIC NOTICE

Completed 1st year

BMP #6 REVIEW NEED FOR STORMWATER COMMITTEE

No additional review for a stormwater committee; however, the education program “Think Blue Exeter” is a subcommittee of the Exeter River Study Committee. Information on activities of the subcommittee is presented at various meetings, which are televised and open to the public. The majority of committee members are local residents.

The Exeter River Study Committee conducted many outreach presentations dealing with the removal of the Great Dam which returned the lower Exeter River to its natural state to improve water quality and native fish populations.

BMP #7 STENCIL STORM DRAINS

All catch basins in town were stenciled with the message “Attention – Drains to Local Waterway” by town employees and the stencils are repainted as needed.

ADDITIONS-

- Exeter Rain Barrel Program – Exeter Conservation Commission offered reduced rates on rain barrels during the month of May 2016 (8 sold in 2016) (attachment)
- Volunteer River Assessment Program (VRAP), which monitors 11 sites on the Exeter River and Little River, between April and August (3 to 5 times each). The Exeter Conservation Commission and Town staff conduct the annual sampling for dissolved oxygen, conductance, pH, turbidity, and temperature.

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

This is a part of the NHDES state-wide river monitoring program. Additional sampling equipment was purchased for use by the Town staff to continue the VRAP monitoring. (attachment)

- Exeter-Squamscott River Local Advisory Committee (ESRLAC) – volunteers representing the twelve communities in the Exeter-Squamscott River watershed celebrated its 20th year of stewardship of the river and its watershed in 2016. Work by ESRLAC included discussions with municipalities and state and federal agencies about water quality in the river and its impact on water quality in Great Bay, the review of development proposals along the river corridor, and assisting with stormwater management projects. Several ESRLAC members participated in Project WISE. (attachment)
- Annual Fish Ladder Tour – May 2015. Presented by NH Fish and Game Department, targeted at the importance of fish ladders. The annual tour of the fish ladder located next to the Great Dam in downtown Exeter. As always, this event attracted a large crowd interested in learning about the annual fish migration from the salt water of the Squamscott River to the fresh water of the Exeter River. (attachment)

ILLICIT DISCHARGE DETECTION AND ELIMINATION

BMP #8 SURVEY OUTFALLS

The Town retained Wright-Pierce, in December 2015, to perform dry-weather outfall inspections and water quality screenings at a selected group of MS4 outfalls. As part of this effort, eleven (11) outfall locations were visited, inspected, and photographed. The inspection forms and photos for each of these outfalls are on record with the Town in paper and electronic formats.

BMP #9 MAP/UPDATE OUTFALLS

The Town retained Wright-Pierce, in December 2015, to perform dry-weather outfall inspections and water quality screenings at a selected group of MS4 outfalls. As part of this effort, eleven (11) outfall locations were verified in the field and revisions were made to the Town's GIS mapping system as necessary.

BMP #10 ORDINANCE TO PROHIBIT NON-STORMWATER DISCHARGES

Existing Storm Drainage Ordinance prevents illegal discharges to the drainage system, with fines. The ordinance will be reviewed and updated as needed after the new Small MS4 Permit for New Hampshire is issued final.

BMP #11 CREATE EDUCATION FOR BUSINESSES

"Think Blue Exeter" – General Stormwater Education.

A pamphlet describing proper deicing chemical (salt) use during winter maintenance operations was created. This will be distributed to businesses with parking lots and snow removal contractors.

BMP #12 HOTLINE

Police Dispatch and Exeter Department of Public Works

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

BMP #13 SAMPLE SUSPECT OUTFALLS

The Town retained Wright-Pierce, in December 2015, to perform dry-weather outfall inspections and water quality screenings at a selected group of MS4 outfalls. Eleven (11) outfalls, a tributary to the Little River, Exeter River, Squamscott River and Norris Brook were inspected and sampled in December 2015. The inspection consisted of verification of the outfall location, completion of dry weather screening, water quality field testing (when flow was present), reconnaissance of potential nearby pollution sources and a photograph log.

Flow was present during these dry-weather inspections at five (5) of the 11 outfalls. Water quality screening was conducted at those 5 outfalls. Six (6) of the 11 outfalls were flagged for follow-up water quality sampling based on either physical condition, water quality observation and field test results, inability to field locate or further questions regarding outfall identification. Follow-up work has not yet been performed for these systems.

BMP #14 TEST SUSPECT CONNECTIONS

Infiltration/inflow investigations were performed in several locations throughout town, including manhole inspections, dye testing, smoke testing, building inspections and flow evaluations.

Approximately 3800 feet of stormwater lines were cleaned and inspected via CCTV camera on Water Street, Lincoln Street, Center Street and 300 feet of Front St.

BMP #15 CORRECT ILLICIT CONNECTIONS

No corrective actions were taken to remove illicit connections to the stormwater collection pipelines.

ADDITIONS –

- The Town maintains 19 “pet waste station” (bags and disposal container) located around Town. A map showing the location of the waste stations and the town walking/hiking trails was created and posted on the Town website.
- The CAPE (Climate Adaptation Plan for Exeter) study included a stormwater collection system mapping component. The study estimated the effects of climate change within the Town. The study included: modeling/technical team focused on creating three models for Exeter’s river and stormwater systems; evaluating water quality, flooding, and stormwater aspects of watershed systems; delineating stormwater catchments in the central urbanized areas of Town. This CAPE study was completed in the winter of 2015. Geosyntec, Inc. was contracted to use the hydraulic models created for the CAPE study to evaluate the existing drainage system during a 10-year storm event. The results of this are being used by the Department of Public Works to develop capital improvement projects to address stormwater quantity and quality.

CONSTRUCTION SITE RUNOFF CONTROL

BMP #16 UPDATE SITE REGULATION

Completed – The Town will review and update the stormwater regulations as needed for the 2017 Small MS4 Permit for New Hampshire.

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

BMP #17 SITE PLAN REVIEW FOR ALL CONSTRUCTION PROJECTS GREATER THAN 1 ACRE

The Technical Review Committee (TRC) reviews all development greater than 1 acre, with a focus on construction and post-construction erosion controls and stormwater Best Management Practices (BMPs).

BMP #18 SITE INSPECTIONS

Projects are inspected throughout construction for all development greater than one acre to monitor stormwater management and erosion controls.

BMP #19 DEVELOP AND IMPLEMENT CONSTRUCTION SITE INFORMATION AND REPORTING PROGRAM

Town construction projects are posted on the town website and social media sites with contact information.

An emergency contact list for all privately owned construction projects is updated regularly and distributed to emergency response personnel.

POST CONSTRUCTION RUNOFF CONTROL

BMP #20 IMPLEMENT SITE APPROPRIATE NON-STRUCTURAL, STRUCTURAL, INFILTRATION, AND VEGETATIVE PRACTICES

BMPs are in place as per Planning Board approved plans. Six (6) of the development/redevelopment projects, reviewed by the Planning Board in 2016, included at least one Best Management Practice (BMP) such as a rain garden or tree box filter.

Addition - Stormwater BMP's are being incorporated into town projects. Two water quality tree filters were installed in the downtown area in 2016.

BMP #21 DEVELOP AND IMPLEMENT LONG TERM OPERATION AND MAINTENANCE PROGRAM FOR BMPs

Maintenance Agreements and Maintenance Plans are implemented during planning and construction process

ADDITIONS –

- Stormwater inspections were performed at several private developments with deficiencies identified.
- A downtown sidewalk replacement project on Water Street was completed in 2016. The downtown area has a high percentage of the impervious area. This project incorporated 2 retrofitted sidewalk tree box filters.
- The Great Dam on the Exeter River was removed during the summer of 2016. When the water level of the river was lowered for this project, the Town spent over \$8,000 on native, wetland seed mix to stabilize the river banks.

POLLUTION PREVENTION AND MUNICIPAL GOOD HOUSEKEEPING

BMP #22 CREATE POLLUTION PREVENTION & GOOD HOUSEKEEPING PROGRAM FOR MUNICIPAL EMPLOYEES

The following training was completed within the last year:

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

- Several of the highway department employees hold NH-DES solid waste certification and train annually for best management practices to operate the transfer station.
- All town Highway Department employees involved in snow plowing were trained on equipment calibration, attended UNH T2 Green SnowPro training course, and received NHDES Salt Applicator Certification.
- Wright-Pierce prepared guidance for Town staff to address work performed in watersheds of impaired water bodies.
- The Town's Natural Resource Planner worked with the "Soak Up the Rain NH" group to identify an area in Exeter for a project. Representatives from SoakNH, NHDES, and ECC constructed a rain garden on LaPerle Avenue in July 2016. (attachment)
- The Town Clerk's office handed out 1,500 rolls of dog waste bags and dispensers to residents when they purchased their dog licenses.

The Town Engineer attended the following classes in 2016: Low Impact Development; Municipal Stormwater Technical Assistance-MS4 sponsored by the Central MA Regional Stormwater Coalition; Stormwater BMP Workshop; and a Stormwater Finance Forum. The Assistant Town Engineer attended a 3-day conference on Low Impact Development.

The Exeter DPW Director is a member of the WISE program and the Exeter Town Engineer is a member of the PTAPP program.

The Town is a member of the Seacoast Stormwater Coalition and the Town Engineer attends regular meetings. The Town contributed \$2,000 toward a consultant to assist the Coalition members in developing a collaborative approach to meet MS4 requirements.

BMP #23 SWEEP STREETS

All Town streets were swept twice (once in spring and once in fall). The streets located within the downtown area were swept bi-weekly during the warm months of the year. In 2016, new tracking equipment was installed on the street sweeper to track the number of miles swept. A total of 1,290 miles were swept in 2016.

BMP #24 INSPECT CATCH BASINS

A total of 586 catch basins were documented with individual inspection forms to be entered into the Town's GIS database.

BMP #25 CLEAN CATCH BASINS

A total of 586 catch basins were cleaned in this year.

NPDES General Permit - Small Municipal Separate Storm Sewer Systems (MS4s)

Permit #NHR041007 Town of Exeter, NH

ANNUAL REPORT 2016 – 2017

LIST OF ATTACHMENTS

1. Exeter River Cleanup flyer (BMP #1)
2. Exeter River Cleanup photos (BMP #1)
3. Exeter River Cleanup newspaper article (BMP #1)
4. Think Blue Exeter website (BMP #3, 4 & 6)
5. Police Department Drug Drop-off (BMP #4)
6. Household Hazardous Waste Day announcement (BMP #4)
7. Septic Week announcement (BMP #4)
8. Rain barrel sale announcement (BMP #7)
9. VRAP data summary (BMP #7)
10. ESRLAC annual report (BMP #7)
11. Fish Ladder Tour announcement (BMP #7)
12. Pet Waste Station map (BMP #15)
13. Rain Garden installation volunteer flyer (BMP #22)