

Municipality/Organization: Town of Derry, NH

EPA NPDES Permit Number: NHR041005

MaDEP Transmittal Number: W-

**Annual Report Number
& Reporting Period: No. 15: April 1, 2017-March 31, 2018**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

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Certification:

I certify under penalty of law that this document and all attachments were prepared under my 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, 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.

Signature: 

Printed Name: Michael A Fowler P.E.

Title: Director of Public Works

Date: April 26, 2018

Part II. Self-Assessment

General

The Town of Derry (The Town), through the Department of Public Works (DPW), has continued with progress both in 1) improving the quality of storm water run-off within the Town under the NPDES Phase II MS4 Storm Water Program, and 2) improving the water quality of its surface water bodies. The Town continues to implement, encourage, and require the use of Best Management Practices established at the onset of the program, as well as new or revised BMPs throughout the term of the permit. The Town continues to receive support from the residents of Derry since the inception of the program as well as from prospective developers interested in incorporating recommendations from Derry's adopted Stormwater Ordinance. Its principles are being followed and incorporated into projects managed by town, commercial, and private entities. There remains sincere interest and enthusiasm by diverse groups of people in Derry including lake and watershed groups, academia, and residents, to maintain and improve the environmental health of the Town including the waterways and the quality of the storm water that enters them, and teaching others about the importance of eliminating non-point source pollution and the value of overall pollution prevention.

All goals identified in the last permit continue to be met and when feasible, improved upon as of this reporting period.

Measurable goals and planned activities are subject to change based on available funding. The Town of Derry experienced level funding in its budgets across all departments due to the current state of the economy. The Town is currently in the budget review process for the next fiscal year. The Town's ability to continue with all the proposed requirements of the new permit is subject to the results of the budget review process.

Catch Basin Cleaning and Street Sweeping

In the 2017 construction season, 750 catch basins were cleaned. The catch basin cleaning program is set up to schedule higher priority catch basins on a more frequent cleaning schedule. There are approximately 150 basins that are cleaned on an annual basis, while the remaining 600 are selected among the remaining basins that pick up little debris and require cleaning on a less frequent basis. The Town is currently budgeting to clean 750 catch basins during the next reporting period.

Street sweeping of the urban areas of town usually begins in March each year and continues through the fall. Due to late winter snowstorms over the last couple years, the start of street sweeping was delayed until April. Approximately 40 miles of roads within the urban compact and nearby roads with closed drainage systems are cleaned each spring through fall; approximately 6 miles of main roads (urban and/or higher traffic count) are cleaned on a weekly basis.

Drain Stenciling

Catch basin stenciling program can be a popular activity for various groups. In prior years, the Town has provided stencils and paint to the Beaver Lake Improvement Association (BLIA), local Boy Scout and Girl Scout Troops, Church groups, and FEMA Corps division of AmeriCorps NCCC (National Civilian Community Corps). The Town's Public Works Department continued to provide the stencils for any group interested in participating in these activities. The Town's stencils have the following messages: "No Dumping, Drains to Lake" or "No Dumping, Drains to Wetland". No groups conducted storm drain stenciling during the 2017 summer season.

Public Outreach and Participation

The Town continues to use events such as Town Council meetings, BLIA meetings and Town-wide Derry Fest, as a means of outreach to the public. Through partnership and open communication with organizations such as BLIA, Conservation Commission, Recreation Department, and the Regional Health Department the Town distributes information on stormwater pollution prevention BMPs, household hazardous waste, pet waste management, and pharmaceutical disposal and take back initiatives.

The BLIA Stream Teams were not active during the 2017 summer term. In prior years, a Pinkerton Academy alumni or former Stream Team volunteer came forward to take the lead on the summer program. The stream teams focus on several streams that flow directly into Beaver Lake. The stream teams are made up of Pinkerton Academy Students working on service-learning projects. The Pinkerton Academy Students, many of whom hope to pursue secondary education in environmental science or biology, use their free time this summer to learn about water ecology, by collecting data that tracks the quality of water that flows into Beaver Lake. However, all the tributaries that are included in the Beaver Lake Watershed will affect the water quality of Beaver Lake, so it is important that all of the streams are in good condition in order to maintain a productive ecosystem in Beaver Lake. In 2016, the Stream Teams tested reaches in Manter Brook, Jenney-Dickey Brook, and Cat-O Brook. Overall, the stream reaches tested were fair or good and demonstrated good macro-invertebrate scores in the upper reaches though a severe drought in south-eastern NH had detrimental effects on overall quality and the ability to test all monitoring locations as some were dry. Historically, almost each of the reaches scored a 'Good' rating according to the NHRSAT ranking system. The NHRSAT ranking system incorporates many aspects of testing stream health including erosion indicators, biological indicators, and chemical and physical indicators such as temperature, stream flow, etc. In 2016, the Town of Derry Environmental Engineer teamed up with the Stream Teams for their kickoff meeting with NH Fish & Game and demonstrated the use new equipment acquired by the Town to collect supplemental data including dissolved oxygen, conductivity, and turbidity.

The Town continues to sponsor Derry Clean-Up Weeks around the week of Earth Day and has had broad participation from the public and various groups in this program including the BLIA and local Boy and Girl Scout troops. Derry Clean-up Week is scheduled for April 21 through April 29. The BLIA held two Beaver Lake Cleanup Days in April and October.

The Town Environmental Coordinator has periodically assisted the BLIA president with related articles for the BLIA e-newsletter such as protecting water quality through the use of non-phosphorus fertilizer, hiring knowledgeable landscapers, and proper management of yard waste. Planned articles in the Spring include BMPs for fertilizer use and management of yard waste.

The town remains available for tours of the Town Hall for students and youth groups (cub scouts, girl scouts). When available or requested the Director

of Public Works and/or Environmental Coordinator will give short presentations on the Town's environmental responsibility and provides age appropriate handouts to participants. Historically, these tours and presentations has resulted in groups contacting us in order to participate in storm drain stenciling, and to brainstorm on other volunteer opportunities. In the past, town representatives also conduct outreach to children with presentations at area schools on recycling and water pollution. On April 19, 2017, the Town is gave another annual tour and informational session to a group of upper classman enrolled in the Pinkerton Academy Environmental Studies Program on the Derry Waste Water Treatment Facility and lab as well as a drinking water treatment system installed on a municipal supply well. The tours have been so successful that another tour is scheduled with Pinkerton Academy for May 16, 2018.

Derry remains active in the Manchester Regional Stormwater Coalition with participation in quarterly meetings and attendance by NHDES representatives. USEPA representatives periodically attended these meetings. The meetings include discussion of ongoing stormwater issues, sharing of experiences, presentations by outside environmental and regulatory agency speakers, and site visits to tour stormwater projects. Over the last reporting period, the meetings have been held jointly with members of the Nashua Regional Stormwater Coalition.

The Town is involved in two household hazardous waste (HHW) collection events per year co-sponsored with the Town of Londonderry. Derry conducts active outreach with public notice and stormwater handouts to Derry residents at our Transfer Station and other town venues. Aggressive outreach and advertising continues to generate a respectable participation by Derry residents and volume of HHW collected. The Town's next event is scheduled for May 19, 2018.

In 2017, the Department of Justice, through local law enforcement, continued with an annual pharmaceutical take-back day. The Town Departments, including the Derry Police Department, Public Works, Health Department, along with the Community Alliance for Teen Safety (CATS) conduct public outreach on the proper disposal of pharmaceuticals, not only in the interest of reducing the likelihood of prescription drug abuse, but in the interest of protecting groundwater and surface water by eliminating disposal practices such as the flushing of medications into septic systems or throwing out with household garbage. Additional outreach included posting of information on the Town's website, display of literature at the Town kiosks, and public notices in the local newspaper (Nutfield News). The Derry Police Department has collected a total of 1,660 pounds of prescription drugs from the last fourteen DEA National Drug Take-Back events, which began in 2010. In 2013 the Derry Police Department installed a permanent prescription drug drop box, available 24 hours a day, located in the lobby of the police department. To date this permanent prescription drug box has collected an additional 4,642 pounds of prescription drugs, for a total of 6,302 pounds of drugs collected.

No new cable television segments were produced this last reporting period. Existing programs continue to periodically air on Derry Local Cable Access stations C17 and D23. During prior reporting periods, the Town produced new cable television segments called Improving our Environment: Green SnoPro Program (February 12, 2015) featuring NHDES Salt Reduction Coordinator and UNH Technology Transfer (T2) Center and Blizzard 2015: Keeping our Roads Clear (January 27, 2015) which included personnel from Derry Public Works and focused on how snow removal efforts with salt reduction efforts made by the Town.

Training and Environmental Organizational Team Meetings

One or more Public Works Employees (including the Environmental Coordinator, Superintendent of Operations, and Crew Chiefs) participate throughout the year in various conferences, training opportunities, or live streaming webcasts related to Stormwater, pollution prevention, and waste

management including the following:

- Joint Manchester & Nashua Regional Stormwater Coalition Meetings (6/8/17, 8/23/17, 10/11/17, 11/14/17, 1/9/18, 3/15/18, 4/17/18, 4/19/18) – Held jointly with various municipalities or their consultants, NHDES, Southern NH Regional Planning Commission, Nashua Regional Planning Commission, UNH Stormwater Center, and periodically USEPA.
- NH MS4 Meeting w/USEPA and NHDES hosted at Derry Municipal Center (4/6/17);
- NHDES Drinking Water Source Protection Workshop, Concord, NH (5/18/17);
- Household Hazardous Waste Coordinators meetings (7/18/17);
- NH Hazardous Waste Coordinator Refresher Training (3/21/18);
- UNH T2 Training (Hosted by Derry) – Green SnoPro Certification Refresher Training (4/25/17, 11/29/17);
- UNH T2 Training (Hosted by Derry) – Culvert Maintainer Workshop (6/6/17);
- USEPA/NEIWPC Pretreatment Coordinator's Workshop (10/25-26/17);
- NH Arsenic Consortium meeting (10/13/17);
- NHMA Webinar: Demystifying the MS4 Permit (9/13/17)
- NHDES/BIA Waste Management Conference (5/24/17)
- Solid Waste Operator Training (1/24/18)
- Topics in Erosion Control and Stormwater Management (3/29/18)
- Lucity Asset Management Conference and Training (9/17-20/17)

SALT REDUCTION PROGRAM

The Town of Derry hosted the meeting location for and participated in the Salt Reduction Workgroup Meetings. These meetings are attended by representatives from Derry, Londonderry, Windham, Salem, NHDES, NHDOT, UNH T2 Center, USEPA, Rockingham Planning Commission, Jeffrey H. Taylor & Associates. During this reporting period, there have been no joint salt reduction workgroup meetings. However, the Town has been involved in the following Salt Reduction Program activities or events:

Training Hosted: The Town of Derry provided the training facility for the following training sessions.

New employees with Derry Highway Department and any new Derry plowing contractors are required to participate in the training. Culvert Maintainer and Green SnowPro Certified employees underwent refresher training.

- *Green SnowPro Certification: Salt Reduction for Parking Lots & Roads by UNH-T2 – 4/25/17 & 11/29/17;*
- *Culvert Maintainer Certification Workshop by UNH-T2 (6/6/17).*

Salt Reduction Equipment and BMPs

The Salt Reduction Plan was updated to include the grant application submitted to the Salt Reduction Steering Committee for the purchase of Automatic Vehicle Location (AVL) technology. This upgrade was discussed in the previous annual reports and proposed to equip nine (9) vehicles that operate within Beaver Brook with AVL technology. This technology would allow the town to track the amount of salt applied on each of the salt routes dynamically. It also logs the amount of salt applied in a central database so that town staff can analyze application rates per route and storm for further optimization. The system will also feature an in-cab display where

operators can view a 90-minute trail of the position of other plow vehicles. The system can be programmed to stop spreading de-icing chemical in areas where they overlap with other plow trucks. Operators can also view this trail to observe areas and perform a manual override if necessary. Studies have shown greater than thirty percent reduction (30%) from overlap along in urban areas. Because Derry is somewhat rural the town is estimating a 4% reduction due to implementation of this technology

As of the end of this reporting period, the administration of the grant for this upgrade has continued to be delayed at the federal and state levels by FHWA and NHDOT. However, it appears that issues may have been resolved and the Town anticipates that the equipment may be purchased and installed during this reporting period.

Cable Television Shows (airing on Local Cable Access stations C17 and D23)

The shows continue to be available for viewing on Derry's YouTube Channel.

- **Blizzard 2015: Keeping Our Roads Clear – 1/27/2015** – Filmed on the road with Derry DPW plow drivers with discussion of BMPs implemented in light of salt reduction efforts. The show was filmed in Derry by Derry's Cable Television Department.
- **Improving Our Environment: Green SnoPro Program – 02/12/2015** - A public service announcement (PSA) video has been collaboratively produced by Derry, the NHDES Salt Reduction Coordinator, and the UNH T² Center. The show was filmed in Derry by Derry's Cable Television Department.

Illicit Discharges/Enforcement

Illicit Discharges and/or Stormwater Violations: Investigations and Response

The Town responded to four (4) complaints of alleged illegal dumping and two (2) of accidental hydraulic line spills that had the potential to enter the Towns stormwater drainage system.

Illegal Dumping

- Fenway Drive - Report of dumping of chicken manure in a drainage swale at an outfall. Upon inspection, found trace amounts of chicken manure in swale and in snow adjacent to swale where it appeared a shovel was wiped off in the snow. Spoke with nearby homeowner who claimed to have only cleaned off the shovel at the swale. No further action.
- Pond Road at Hampstead Road - Report of possible glittery paint spilled on road and drained into catchbasins. Staff inspected all catchbasins and drainage system on the Pond Road and nearby Hampstead Road. No evidence of paint or illegal dumping identified. We concluded the complainant misidentified sand with high mica content in the road as a glittery paint. An automotive repair shop nearby likely contributed to the complainant suspecting it was paint.
- Kilrea Road – Resident discovered oily debris in a drainage swale adjacent to road. Upon inspection it was discovered that oil-saturated wood ash with used oil filters was disposed of in the swale immediately upgradient of a cross-gradient. Due to pending rainstorm that evening, NHDES was notified and Clean Harbors arrived to clean up the oily debris. Absorbent socks and pads were used to catch any residual that the rain may wash away. No further action.

- Overledge Drive – Complaint of numerous containers of hazardous waste dumped on side of road. Upon inspection, staff discovered 21 containers ranging in size from 1-quart to 5-gallon laying scattered in the snow off the side of the road. No evidence of spills or leakage was observed. Half of the containers contained used oil and hydraulic fluid with the remainder either antifreeze or unidentifiable. Staff collected the materials and deposited the used oil in the Town’s *Used Oil For Recycling* tank. The remaining containers were stored awaiting disposal at the Town’s Household Hazardous Waste Collection event to take place in May 2018.

Hydraulic line failures

- High Street at Broadway – A trash hauler experienced a hydraulic line failure resulting in a spill to the roadway. An estimated 5-gallons entered a nearby catchbasin. The waste hauler’s emergency response contractor cleaned up the spill and cleaned out the catchbasin. At the time of the spill and cleanup there was no precipitation and no water present in the catchbasin. No spilled material traveled beyond the one catchbasin.
- Florence Street – Resident reported “oil” in the road in front of their house first observed the evening before. An inspection identified a narrow (2-4 inch) “oil-like” stain several hundred feet long along the road indicative of a possible transmission or hydraulic line failure on a motor vehicle. Town staff attempted to use speedi-dry to absorb any remaining fluid. However, the oil had been absorbed by the asphalt. There was no release to storm drainage system or surface water

Sewer Asset Management: Sewer Line Inspection and Maintenance

The Town continued with its comprehensive video inspection program to assess the condition and maintenance, repair, and replacement needs of the Town’s municipal sewer collection system. The program uses a CCTV sewer line inspection truck purchased in 2014 to help identify areas where there may be groundwater infiltration into the sewer system as well as areas where there may be leakage from the lines to the environment. In 2017, the Town video inspected 11,492 feet of sewer lines. No sewer line rehabilitation via relining or point repair was required during in 2017. Routine preventative maintenance and cleaning included high pressure cleaning 98,488 feet of sewer and conducting root control in 7,434 feet of sewer lines. In 2017, 230 sewer manholes were inspected resulting in 11 being repaired or rebuilt. This program will continue into the next reporting period.

Stormwater Asset Management Program (New Program)

The Town applied for a state Revolving Fund loan to assist with implementation of a Stormwater Asset Management Program. This new program will piggyback on the sewer asset management program and incorporate and improve upon the current stormwater utility mapping program. The Town will use the same Lucity program used in the sewer asset management program. This program is expected to kick off during the next reporting period.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
1.1	Document & Continue Existing Programs	Public Works	Review public education programs that are already in place that may be utilized as mechanisms to distribute storm water information. Prepare written documentation that summarizes existing programs in place that may be used in conjunction with the Phase II storm water program.	<p>Goals Met: The Town of Derry continued to distribute information through kiosks located at the Municipal Center, Transfer Station, and Derry public buildings throughout town. The Town website is updated as needed regarding environmental protection, pollution prevention, recycling of universal wastes, and storm water programs.</p> <p>The overhaul of Town website is more user-friendly. Improvements allowed us to further highlight environmental programs including storm water management, household hazardous waste, recycling, and PPCP disposal.</p> <p>The Town in coordination with the regional health department distributed and posted information on proper disposal of pharmaceuticals and personal care products in conjunction with the sixth annual pharmaceutical take-back day and provided outreach material to Derry PD and EMS and the Community Alliance for Teen Safety.</p> <p>The Town created its first Facebook page which has gained over 800 followers.</p>	<p>The Town intends to continue distributing information through the venues that it has established.</p> <p>Further improvements to the Town’s website will be ongoing.</p> <p>A next Pharmaceutical Take-Back Day is scheduled for Saturday April 28, 2018.</p> <p>Outreach through the Town’s Website and Facebook page will expand with more notices and general environmental including stormwater pollution prevention information.</p>
Revised					

1.2	Coordinate Public Educators	Public Works	Organize Town employees, educators, volunteers, etc. to work together to develop materials to be distributed to the public and school systems regarding Phase II storm water.	<p>Goals Met: The Town reaches many of the same students through existing volunteer organizations that have worked closely with the town on the stenciling program.</p> <p>In April, the Town took upper classmen from Pinkerton Academy Environmental Studies Program on a tour of the Derry Waste Water Treatment Facility and a community well with a treatment system.</p> <p>As in previous years, Pinkerton Academy Biology Faculty are involved in the Beaver Lake Water Shed Partnership and have students conducting assessment of segments of tributaries to Beaver Lake. Students obtained real life experience in environmental science while performing a valuable service to the community. The stream teams were not active in 2017.</p>	<p>The Town intends to continue to work closely with the School Department to incorporate storm water education as well as other environmental programs into the regular curriculum. We will also continue to support efforts by volunteers as well as paid interns to speak at local youth organizations and schools. In April 2018, the Town will once again to take upper classmen from Pinkerton Academy Environmental Studies Program on another tour of the Derry Waste Water Treatment Facility. During the 2018 summer season, if the Stream Teams are active, the Town will work with the teams to collect data using new monitoring equipment in order to supplement current data collection methods.</p>
Revised					

1.3	Coordinate information and Program Distribution within School Network	Public Works	Prepare brochures or fact sheets to be distributed to the public by direct mailings. Provide information on the Town's website. Begin developing curriculum to be used to educate students about storm water issues. Contact 50% of the schools located within the Town.	<p>Goals Met: Direct mailings of Notices of the Household Hazardous Waste Collection events and Stormwater Pollution Prevention are regularly included with "Drinking Water Consumer Confidence Reports".</p> <p>In April, the Town conducted outreach via mailings to 766 sewer customers in targeted areas. The mailing will cover three topics: "What's Flushable", "Sump Pump" awareness, and "Fat-Free Sewers". The goal is to improve awareness and reduce maintenance and risk of blocked sewers which lead to sewage overflows.</p>	<p>The Town will continue to work with the public schools and Pinkerton Academy to distribute information.</p> <p>In April, Town staff are participating in Pinkerton Academy's Environmental Sciences Advisory Board to help the school evaluate ways to improve enrollment in the school's environmental studies program.</p>
Revised				<p>The Public Works Department continues to distribute informational brochures and fact sheets at the annual Derryfest and to participants at the Household Hazardous Waste Collection event. The Town contacts public schools including Pinkerton Academy through their environmental sciences department.</p>	

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
2.1	Create Task Committee	Public Works	Task committee is established. The task committee will be responsible for organizing volunteers, etc., to assist the Town with the implementation requirements for the Phase II Storm Water Program. Document meeting minutes.	Discontinued in previous years. See annual report for 2004-2005. Redundant due to other groups already established.	N/A
Revised	<i>The Town of Derry has determined that a task committee is not necessary to achieve the goals set forth in the Storm Water Management Plan. Therefore, this BMP has been eliminated from the plan.</i>				
2.2	Conduct Public Meeting/Acquire Public Input	Public Works & Town Administration	Public Meeting. Phase II Storm Water Program information to be presented. Document meeting minutes.	Goals Met: All actions were completed in the previous reporting periods as follows: Public meeting held on the Storm Water Ordinance and Stormwater System Design Regulations. The Public Works Department continues to encourage public input into the Storm Water Program. The Town is in contact with the Beaver Lake Improvement Association (BLIA) on a routine basis and has provided input on newsletter articles.	The Public Works Department will continue to strive to educate the public in storm water. Specific public meetings are not currently scheduled. Instead public input is solicited through public event displays, social media, and working through non-government organizations, and contributions to newsletters.
Revised					
2.3	Establish Storm Water Information Display at Major Town Events	Public Works	Phase II Storm Water information display at one town event per year.	Goals Met: This task was completed with a display set up at public meetings and outreach material posted at town kiosks.	Displays will be set up at Derryfest events this year. Youth Groups have also expressed interest in helping with these events for public education as community service projects.
Revised					

2.4	Storm Drain Stenciling/Community Clean-up Day	Public Works	50% of storm drains stenciled using volunteers or school students. Community clean-up day held once a year using volunteers and/or students.	<p>Goals Met:</p> <p>Storm Drain stenciling is periodically conducted by various groups including Boy Scouts, Girl Scouts, church groups, and the Beaver Lake Improvement Association (BLIA). Numerous groups participate each year in Derry Cleanup Day. Additional interest in these activities is voiced regularly. During the summer of 2017, no storm drains were stenciled.</p> <p>Numerous groups and individuals participate in Derry Clean-Up Day which occurs in April each year. The Town continues to provide bags for interested parties.</p> <p>BLIA held two cleanup events in 2017: A spring event in April and a fall event in October.</p>	<p>The storm drain stenciling program will be an ongoing program as the paint will wear off and need to be touched up or as roads are repaved. BLIA has already expressed interest in re-stenciling catchbasins around Beaver Lake in 2018. Derry Cleanup Day is currently scheduled during the month of April 2018 . The BLIA events are yet to be scheduled.</p>
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
3.1 Revised	Map Outfalls and Receiving Waters	Public Works & IT Department	Produce a map showing outfalls and receiving waters	<p>Goals Met: The Town of Derry continued to revisit the storm drain mapping program to do updates, make corrections to previously completed mapping, and identify areas in need of maintenance or repair. The inspections conducted during dry weather conditions continued with remapping, repairs, and stream cleaning projects. The application for the 2016 NH Clean Water State Revolving Fund (CWSRF) Loan Program was delayed to unforeseen circumstances and a new pre-application was submitted and approved. The loan will be used to develop a Stormwater Asset Management Program.</p>	<p>The Town of Derry will strive to keep the database up-to-date by adding any new storm water collection systems to the base map. Revisions and corrections to the data base will be made as errors or old infrastructure previously missed are discovered. Additional inspections will occur during the next reporting period as permitted and resources allow in order to verify flow directions and construction.</p> <p>The Town was informed that our pre-application for the CWSRF was approved. The Town is currently preparing the formal application.</p>
3.2 Revised	Evaluate Need for Storm Sewer Ordinance; Develop if Necessary	Public Works, through a consultant.	Complete review of existing local regulations and ordinances to determine what mechanisms are already in place. Prepare a Storm Sewer Ordinance for adoption by the Town.	<p>Goals Met: The Derry Town Council adopted the stand-alone Storm Water Ordinance and Stormwater System Design Regulations during a previous reporting period.</p>	Continue to implement and enforce the Storm Water Ordinance and Stormwater System Design Regulations if required. Prepare revisions if necessary.
3.3 Revised	Train Volunteers in Illicit Discharge Identification	Public Works	Complete a training document. Complete volunteer training for illicit discharge identification. This must include information related to the hazards associated with illegal discharges and improper waste disposal.	<p>Goals Met: The Town uses the illicit discharge report form to be used by Town employees and volunteers if/when illicit discharges are suspected or identified. Any reports that are made to the Code Enforcement Office or Public Works Department are investigated.</p>	The Town will remain available to train and work with the BLIA stream and lake monitoring volunteers on illicit discharge detection.
3.4 Revised	Dry Weather Screening of Outfalls	Public Works	Utilize trained volunteers and/or students to complete dry-weather screening of outfalls. Complete dry-weather screening forms for inspection. Document findings of screening. Identify outfalls requiring further follow-up.	<p>Goals Met: Limited dry weather screening of outfall continued through 2017 as catch basins were cleaned or maintenance was performed at outfalls. No specific illicit discharges were identified during the screening.</p>	Limited dry weather screening of outfalls will continue, dependent upon availability of funding and other budget constraints. In addition, volunteers working with the Beaver Lake Watershed Partnership are encouraged to become involved in this process.

3.5	Develop System of Identifying Illicit Discharges and Initiate Program to Eliminate Them	Public Works	Complete Plan outlining system for eliminating illicit discharges. Initiate elimination program. Eliminate the majority of identified illicit discharges.	<p>Goals Met: The Town of Derry utilizes an illicit discharge form to note any potential illicit discharges discovered during catch basin cleaning. Any reports from the public are placed on work orders and investigated by the Environmental Coordinator, Supt. of Operations, or the Code Enforcement Officer.</p> <p>The Town also relies on the public as the eyes and ears for possible violations and to report them so that the Town can respond.</p>	Continue with existing program and practices of identifying and investigating illicit discharges. Step up enforcement if necessary.
Revised					
3.6	Identify Magnitude of Effort to Continue Mapping Storm Sewer System.	Public Works	Complete a review of the storm sewer system mapping in Town. Prepare an assessment of the effort required to continue this mapping.	<p>Goals Met: All new additions to the Public Storm Sewer system are added to the Town's Geographic Information System. Occasionally, data gaps were identified within catchments. Based on the results of the verification program started in 2015, the Town recognizes a much larger effort will be required to correct errors in mapping by others. As a result, the Town completed a Clean Water State Revolving Fund Pre-application to develop a Stormwater Asset Management Program.</p>	The Town received word that the Pre-Application for the CLSRF was approved and will work on completing a formal application this spring. Meanwhile, the Town will continue updates as available and a Town-wide inspection of existing mapped areas. Mapping will be conducted as time and budget allows. If feasible, the Town will begin more detailed mapping during the 2018 construction season.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
4.1	Document Existing Programs and Expand Them as Required	Public Works	Complete Review of Existing Local regulations pertaining to construction site runoff control. Complete written summary of existing requirements. This may require additional assessment of potential water quality impacts. Complete necessary additions to existing documents/ordinances for establishing water quality benchmarks, site inspection procedures, etc. Ordinance revisions will be accompanied by appropriate public notice and comment opportunities. The regulations will ultimately address areas of concern noted above.	<p>Goals Met: The Town is routinely checking to verify that a) an NOI has been filed with EPA for all sites over one acre in disturbance, b) an Alteration of Terrain permit has been filed with NHDES. We continue to use a Construction Site Run-off Control Inspection form when inspecting sites through our Engineering Division to ensure the SWPPP for a construction site is being adhered to.</p> <p>During the reporting period, there were no new CGP NOIs submitted. There were five (5) Notice of Terminations (NOTs) covering three (3) construction projects.</p>	Continue to be vigilant in the enforcement of construction site erosion control, ensuring SWPPP are present on site and adhered to, continuing random cross-checking of CGP NOIs filed against projects in town.
Revised					

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
5.1	Document and Enhance Procedures for MS4 Storm Sewer System	Public Works	Complete review of existing MS4 maintenance procedures. Complete formal procedures manual for conducting MS4 maintenance, including record keeping forms, BMPs related to development, etc. Regulations and ordinances will be expanded, as appropriate, to incorporate measures to address the areas of concern noted above.	<p>Goals Met: The Town continues to keep records of the locations and number of catch basins cleaned. The Town also crosschecks the EPA's eNOI database to ensure that NOIs and NOTs have been filed. Most site plan reviews include a review by the Environmental Coordinator which includes a focus on construction stormwater management and groundwater protection. The Town routinely encourages new development to consider BMPs that go beyond the minimum regulatory requirements. The Town will be enhancing the program with the implementation of a Stormwater Asset Management Program and completed a pre-application for a CWSRF which has been approved.</p>	Continue keeping records on areas cleaned. The Town developed a schedule based on historical amounts of debris removed from specific catch basins. Complete the CWSRF application and begin the Stormwater Asset Management Program.
Revised					
5.2	Incorporate Best Management Practices into Town Master Plan	Public Works & Planning Department	Complete update of Town's Master Plan to include Best Management Practices.	<p>Goals Met: State and nationally recognized BMPs are included by reference in the Town's storm water ordinance and Storm Water System Design Regulations. The Town developed and began implementing a Salt Reduction Plan which was approved by USEPA, FHWA, and NHDES. The Plan incorporates winter road maintenance and snow removal BMPs, including calibration of salt spreaders and conducting snow removal based on winter severity conditions and forecasts. The Town prepared and adopted a Source Water Protection Plan in January 2012 which was incorporated into the Master Plan.</p>	Follow BMPs in Town activities and projects. Make copies of BMPs available to public. Update BMPs as revisions occur.
Revised	<i>The updates to the Town's Master Plan were delayed until 2008-2009 time period. BMPs were incorporated into the Storm Water Ordinance.</i>		Incorporate BMPs into Storm Water Ordinance and Storm water System Design Regulations.		

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
6.1 Revised	Document and Enhance Employee Training Procedures	Public Works	Complete review of existing training programs. Complete formal employee training manual.	<p>Goals Met: DPW continues to have employees trained and provide employees with informational literature. The Town continues to host salt reduction training sessions and GreenPro certification for winter snow removal and deicing operations. Training is given by UNH Technology Transfer Center for the public works plow truck operators and Town contracted plow truck drivers. In addition, numerous commercial and private plow truck operators have taken the training. The Town has employees attend Green SnoPro certification or refresher courses as needed. The Town has also hosted and had employees participate in Certified Culvert Maintainer training, utility asset management, Hazardous Waste Coordinator training, and various stormwater management & erosion control workshops.</p>	Training and/or refreshers on SWPPPs, housekeeping, spill response, salt reduction, and erosion control will continue to be conducted periodically as needed.
6.2 Revised	Evaluate the Use of Pesticides, Sand and Salt	Public Works	Complete review of existing procedures. Complete formal procedures manual for handling and use of pesticides, sand, and salt.	<p>Goals Met: Pesticides and herbicide use are always kept at a minimum. When used they are applied only by licensed applicators for any substantial projects. Fertilizer application on recreational fields is contracted to licensed commercial applicators that are required to use only low phosphorus, slow-release nitrogen fertilizer. Under the oversight of the Environmental Coordinator, herbicides are selectively used by commercial applicator to control invasive Japanese Knotweed at select locations. This past year the program conducted spot treatments at most locations with two new locations. The Town is involved in the regional Salt Reduction Workgroup with USEPA, NHDES, NHDOT, FHWA, and UNH-T2. No meetings were held during this reporting period. The Town developed an evolving Salt Reduction Plan which was approved by USEPA, FHWA, and NHDES.</p>	Continue with existing practices, participation in Salt Reduction Committee, and providing Town facilities for regional training initiatives. Conduct outreach to public. The Town will continue to look at better technology to reduce the salt and sand usage. The Town is still waiting for the NHDOT/NHDES to approve the grant for the AVLs.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
Revised	Implement BMPs for reduction of chloride and phosphorus input into impaired surface waters	Public Works	Develop Salt Reduction Plan and implement BMPs, collect useful data to complement state’s data. Meet TMDL for chloride in the Beaver Brook Watershed	<p>The town has continued its involvement in Salt Reduction workgroup with NHDES and other stakeholders.</p> <p>The town is maintaining a net reduction in the 5-year and 10-year running average over the last 5 years through 2017 compared to historical averages. The allocation per year is based on the reported Weather Severity Index (WSI). The severity of the 2017-2018 winter season resulted in a higher than anticipated quantity of salt used during the most recent season. Comparable increases were realized state-wide. The WSI for the 2017-2018 season is not available at this time.</p> <p>Funding for the purchase and implementation of Automatic Vehicle Location Systems BMP under the SRP was delayed on the state level however the issue has been resolved.</p>	<p>The Town will continue to include chloride reduction education in its outreach efforts and evaluate the purchase of new technology for reduced volumes of deicing chemicals applied within the Town.</p> <p>The Town will continue to host Salt Reduction Workgroup meetings and Salt Applicator Certification Training workshops.</p> <p>Pending final grant approval, the Town will equip nine (9) vehicles that operate within Beaver Brook with Automatic Vehicle Location (AVL) technology to track the amount of salt applied on each of the salt routes dynamically. It will also log the amount of salt applied in a central database so that town staff can analyze application rates per route and storm for further optimization.</p>
				The stream testing following the Volunteer River Assessment Program and Volunteer Stream Assessment Program was delayed again this past year..	The Town plans to continue the stream testing in 2018. The BLIA Stream Teams will be included should they become active in 2018. The Town hopes to conduct random periodic phosphorus testing of Hood Pond and associated tributaries to ensure continued compliance and improved water quality.

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	Yes
Annual program budget/expenditures	(\$)	\$70,000 est.

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	20,000 est.
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y, ~2 miles
Household Hazardous Waste Collection Days		
▪ days sponsored <i>(Twice/year cosponsored with Town of Londonderry)</i>	(#)	2
▪ community participation <i>(estimate 300 Derry households/yr represented)</i>	(%)	(see comment)
▪ material collected	(tons or gal)	~18 Tons
School curricula implemented	(y/n)	Yes

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control	X			X
▪ Post-Development Stormwater Management	X			X
Accompanying Regulation Status (indicate with "X")				

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(*Includes road crossings) (#)	1289*
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	100%
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	50%
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	~50%
% of population on septic systems	(%)	~50%

Construction

Number of construction starts (>1-acre)	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public <i>(*Specific to stormwater, erosion, or sediment control on sites > 1-acre)</i>	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections completed	(# or %)	100%
Estimated volume of stormwater recharged	(gpy)	Unknown

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	Once/4yrs
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	Once/yr
Total number of structures cleaned	(#)	750 (this period)*
Storm drain cleaned	(LF or mi.)	unknown
Qty. of screenings/debris removed from storm sewer infrastructure (*estimated)	(tons)	100*
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Beneficial use
Cost of screenings disposal	(\$)	Unknown

Average frequency of street sweeping (non-commercial/non-arterial streets) (Streets w/ closed drainage systems only)	(times/yr)	1/year
Average frequency of street sweeping (commercial/arterial or other critical streets) (weekly April-Nov.)	(times/yr)	35/year
Qty. of sand/debris collected by sweeping (*estimated)	(tons)	750
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Beneficial use
Cost of sweepings disposal	(\$)	unknown
Vacuum street sweepers purchased/leased	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	n
Mechanical street sweepers contracted out		

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers (Commercial application to recreational/athletic fields)	(lbs. or %)	Unknown
▪ Herbicides (mandatory by NHDES-Commercial application on waste water lagoons embankment and drainage swales at closed landfill, Spot treatments of invasives)	(lbs. or %)	Unknown
▪ Pesticides	(lbs. or %)	Unknown

Anti-/De-Icing products and ratios (*Average for season based on total purchased. Actual ratios vary based on weather conditions. The 2016-2017 winter season was unusually severe compared to the typical historic winter weather conditions. These unusual conditions included some significant storms and several precipitation events causing extreme icing conditions. (CaCl ₂ , CMA, KAc, and KCl were not used)	(4800 Tons) (50 Tons)	% NaCl % MgCl ₂ % Sand	99%* 1%*
Pre-wetting techniques utilized – *Five (5) vehicles equipped	(y/n)		Yes
Manual control spreaders used	(y/n)		Yes (4)
Automatic or Zero-velocity spreaders used	(y/n)		Yes (7)
Estimated net reduction in typical year salt application * The agreed upon method of evaluating net reduction to comply with the TMDL is to compare salt usage by using the 5- and 10-year running averages with significant consideration given to weather severity index. Salt usage continues to show a decrease in the 5- and 10-year running averages.	(lbs. or %)		NA %*
Salt pile(s) covered in storage shed(s)	(y/n)		Yes
Storage shed(s) in design or under construction *New storage and loading facility completed in 2008	(y/n)		NA*