

**Municipality/Organization:** Town of Derry, NH

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**EPA NPDES Permit Number:** NHR041005

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**MaDEP Transmittal Number:** W-

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**Annual Report Number  
& Reporting Period:** No. 13: April 1, 2015-March 31, 2016

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## 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: 

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Printed Name: Michael A Fowler P.E.

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Title: Director of Public Works

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Date: April 22, 2016

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## 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.

Due to the extension of the permit renewal by USEPA, all measurable goals and planned activities are subject to change based on the contents and requirements of the Final MS4GP. Over the last year the Town of Derry experienced level funding in its budgets across all departments due to the current state of the economy. Budget reductions enacted during the previous fiscal year were restored following a town-wide vote. The Town is currently in the budget review process for the next fiscal year and the Derry Town Council has set new budget reduction goal starting in July 2016 (FY17). If enacted, this will have a significant impact on DPW's ability to conduct all planned activities and continue to reach all measurable goals. In addition, the Town does not foresee being able to conduct all of the proposed requirements or meet some of the deadlines proposed in USEPA's Draft 2016 MS4 permit.

### Catch Basin Cleaning and Street Sweeping

In the 2015 construction season, 219 catch basins were cleaned out of the 750 budgeted. The reduction was due to equipment issues. The remainder will be completed this spring under the current fiscal year. 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, pending budget constraints.

Street sweeping of the urban areas of town begins in March each year and continues through the fall. 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. However, due to proposed budget cuts under the new Town Council the total number of miles of roads swept and the frequency of street sweeping may be reduced in 2016.

## Drain Stenciling

Catch basin stenciling program is still 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 wording stating "No Dumping, Drains to Lake" or "No Dumping, Drains to Wetland". During the summer of 2015, the BLIA worked with students from Rivier University to stencil approximately 30 catchbasins along streets surrounding Beaver Lake.

## 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 was able to distribute information on stormwater pollution prevention BMPs, household hazardous waste, pet waste management, and pharmaceutical disposal and take back initiatives.

In 2014, the Town purchased additional surface monitoring equipment including pH meter, turbidity meter, conductivity meter, and dissolved oxygen meter. With the assistance of an environmental studies student volunteer from Endicott College, the Town used the equipment during the summer of 2015 for spot and regular routine monitoring of several streams and surface water bodies in accordance with the Volunteer Lake Assessment Program (VLAP) and Volunteer River Assessment Program (VRAP). Water bodies tested include: Beaver Lake, Beaver Brook, Manter Brook, Jenney Dickey Brook, Cat-O-Brook, West Running Brook, Hood Pond, Horne Brook, and Shields Brook. The data is being evaluated for water quality and any identifiable trends. The Town is in the process of sharing the data with NHDES to aid in evaluating water quality of impaired waters. In 2016, the Town will continue to conduct monitoring in coordination with the stream teams in order to provide educational experience for the students and to supplement the team's data collection efforts.

The BLIA Stream Teams were inactive during the 2015 summer term. However, a Pinkerton Academy alumni and former Stream Team volunteer has come forward to take the lead on the 2016 summer program. The stream teams focus on several stream reaches 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 of 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 2014, the Stream Teams tested reaches in Manter Brook, Jenney-Dickey Brook, Partridge Brook, and Cat-O Brook. Overall, the stream reaches tested were fair or good and demonstrated good macro-invertebrate scores. Almost all of the reaches scored a 'Good' rating according to the NHR SAT ranking system. The NHR SAT 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. Also in 2016, the Town of Derry Environmental Engineer will be teaming up with the Stream Teams to use the new equipment acquired by the Town to collect supplemental data including dissolved oxygen, conductivity, and turbidity.

The Town continues to sponsor Derry Clean-Up Week during 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 Weeks is scheduled for April 17 through April 30. The Beaver Lake Watershed Partnership (BLWP) continues to work diligently within Derry as well as Auburn and Chester to improve water quality within the Beaver Lake Watershed. Many of the Partnership's goals parallel the goals set for the Town of Derry in our MS4GP. 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.

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 brain storm on other volunteer opportunities. In the past, town representatives also conduct outreach to children with presentations at area schools on recycling and water pollution. Over the last year, no groups have come forward for tours. In April 2016, the Town is taking a group of upper classman enrolled in the Pinkerton Academy Environmental Studies Program on a tour of the Derry Waste Water Treatment Facility and lab as well as a drinking water treatment system installed on a municipal supply well. The

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. Attendance by communities from other regions continues.

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 14, 2016.

In 2015, 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 now has a permanent prescription drug drop box located in their main lobby that is open 24 hours/day, seven days/week.

During the prior reporting period, 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. While no new cable television segments were produced this last reporting period, the existing programs continue to periodically air on

Derry Local Cable Access stations C17 and D23.

### 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:

- Manchester Regional Stormwater Coalition Meetings (10/6/15) – Held jointly with Manchester, Londonderry, Goffstown, Auburn, Bedford, Plaistow, Windham, Nashua, Merrimack, Pembroke, Hooksett, and Amherst with frequent attendance by NHDES, Southern NH Regional Planning Commission, and various consultants.
- NH MS4 Compliance Round Table Workshop (5/7/15)
- NH MS4 Meeting w/USEPA and NHDES (3/30/16)
- I93 Salt Reduction Work Group Meeting (9/16/15), Salt Management Plan Update Meeting (12/10/15)
- NHDES Drinking Water Source Protection Workshop, Concord, NH (5/6/15)
- Household Hazardous Waste Coordinators meetings (9/23/15, 3/1/16)
- UNH T2 Training (Hosted by Derry) – Culvert Certification Training (4/29/15, 9/10/15)
- UNH T2 Training (Hosted by Derry) – Green SnoPro Certification Training (4/15/15, 11/24/15, 12/1/15, 3/24/16)
- USEPA NPDES Webinars: Overview of EPA’s 2015 MSGP MSGP (7/1/15), Training for 2015 MSGP Electronic Reporting System (8/12/15), NetDMR Training (8/19/15)
- USEPA/NEIWPCC Pretreatment Coordinator's Workshop (10/28-29/15)
- NH Industrial Pretreatment Coordinators Meeting at NHDES (6/12/15)
- FOG (Fats, Oil & Grease) Training at NHDES (5/19/15)
- NHDES/BIA Waste Management Seminar (11/2/15)
- NH Arsenic Consortium meeting (3/24/16)

### **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. The Conservation Law Foundation did not attend any meetings over the last year. During this reporting period, the Town has been involved in the following Salt Reduction Program activities or events:

#### Salt Reduction Work Group Meetings:

- Salt Reduction Workgroup Meetings – 9/16/15, 12/10/15

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. One derry employee became Green SnoPro Certified while three (3) underwent refresher training.

- *Green SnowPro Certification: Salt Reduction for Parking Lots & Roads by UNH-T2 – 4/15/15, 11/24/15, 12/1/15, 3/24/16*

### Salt Reduction Equipment and BMPs

The Salt Reduction Plan was updated a grant application submitted for the purchase of Automatic Vehicle Location (AVL) technology. The Town proposes to equip nine (9) vehicles that operate within Beaver Brook with AVL technology. This technology will allow the town 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.

The system will also feature an in cab display where operators can view a 90 minute trail of the position of other plow vehicles. By viewing this trail operators will be able to stop spreading de-icing chemical in areas where they overlap with other plow trucks. 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

### 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 T<sup>2</sup> Center. The show was filmed in Derry by Derry's Cable Television Department.

## **Town Construction Projects**

### Rt. 28 Sewer Expansion Project

An additional phase of the Town's Rockingham Road sewer and water expansion project was completed in 2015. The project included the installation of stormwater runoff treatment swale and BMPs.

### New Transfer Station Project

Construction of the new transfer station was completed in January 2016. The new facility included the construction of a 240' long by 15' wide infiltration basin (with vegetated filter strip and shredded bark/wood fiber), 130' of grass-lined treatment swales, and a 100' by 40' stormwater detention pond.

## **Illicit Discharges/Enforcement**

### Illicit Discharges and Stormwater Violations: Investigations and Response

Previously the Town reported that an enforcement action by NHDES is pending against a property owner in town due to a stormwater issue associated with extensive erosion from a private unpaved road. The Town initiated enforcement action and has been in periodic negotiations to rectify the situation. In the interim, the town installed sediment detention BMP in the Town-owned catchbasin to eliminate sediment from entering the MS4 and surface water.

### **Sewer Line Inspection and Maintenance (New Program)**

In 2014 the Town purchased a CCTV sewer line inspection truck and began a comprehensive video inspection program to assess the condition and maintenance, repair, and replacement needs of the Town's municipal sewer collection system. The program helps 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. During this reporting period, the Town video inspected 41,271 feet of sewer lines. As a result of the inspections, approximately 157 feet of sewer line were relined while another 20 feet were replaced. This program will continue into 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 13 (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><b>Goals Met:</b> 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 in regard to environmental protection, pollution prevention, recycling of universal wastes, and storm water programs.</p> <p>The Town website underwent an overhaul in order to make it more user-friendly. Improvements will allow 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 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 23, 2016.</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><b>Goals Met:</b> The Town has had the opportunity to reach many of the same students through existing volunteer organizations that have worked closely with the town on the stenciling program. In previous years, Pinkerton Academy Biology Faculty are involved in the Beaver Lake Water Shed Partnership and had students in their biology courses conducting assessment of segments of streams that are 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 2015, however a Pinkerton Alumni/former student volunteer will be leading the stream teams in 2016.</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.</p> <p>In April, the Town is scheduled to take 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>During the 2016 summers season, the Town will work with the Stream 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><b>Goals Met:</b> 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>The Public Works Department continues to distribute informational brochures and fact sheets at the annual "Town Fair" Derryfest and to participants at the Household Hazardous Waste Collection event. The Town contacts public schools including Pinkerton Academy through their biology department.</p>	The Town will continue to work with the public schools and Pinkerton Academy to distribute information.
Revised					

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (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.	<b>Goals Met:</b> 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 scheduled. Instead public input is solicited through public event displays 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.	<b>Goals Met:</b> This task was completed with a display set up at Derryfest and public meetings.	Displays will again 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.	<b>Goals Met:</b> 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. Approximately 30 storm drains were stenciled during the reporting period by volunteers from Rivier University working with the Beaver Lake Improvement Association. Numerous groups and individuals participate in Derry Clean-Up Day. The Town continues to provide bags for interested parties.	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. Derry Cleanup Day is currently scheduled during the month of April 2016.
Revised					

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
3.1	Map Outfalls and Receiving Waters	Public Works & IT Department	Produce a map showing outfalls and receiving waters	<b>Goals Met:</b> The Town of Derry is revisiting the storm drain mapping program in order 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 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 confirm flow directions and construction.
Revised					
3.2	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.	<b>Goals Met:</b> The Derry Town Council adopted the stand-alone Storm Water Ordinance and Stormwater System Design Regulations during a previous reporting period.	Continue to implement and enforce the Storm Water Ordinance and Stormwater System Design Regulations if required. Prepare revisions if necessary.
Revised					
3.3	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.	<b>Goals Met:</b> 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.	The Town will continue to train and work with the BLIA stream and lake monitoring volunteers on illicit discharge detection.
Revised					

3.4	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.	<b>Goals Met:</b> Limited dry weather screening of outfall continued through 2014 as catch basins were cleaned or maintenance was performed. No specific illicit discharges were identified during the screening.	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.
Revised					
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.	<b>Goals Met:</b> 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. 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.	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.	<b>Goals Met:</b> 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.	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 2016 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 13 (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><b>Goals Met:</b> 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 10 reported ongoing construction projects requiring 11 CGPs. All of these are still in Active status with a few expected to file NOTs this year.</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 13 (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><b>Goals Met:</b> 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.</p>	Continue keeping records on areas cleaned. The Town developed a schedule based on historical amounts of debris removed from specific catch basins.
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><b>Goals Met:</b> 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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Year
6.1	Document and Enhance Employee Training Procedures	Public Works	Complete review of existing training programs. Complete formal employee training manual.	<p><b>Goals Met:</b>            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 had one (1) new Green SnoPro certification and three (3) go through the refresher course.</p> <p>Two employees attended the Annual NH Salt Symposium this past year.</p> <p>The Town has also hosted and had employees participate in Certified Culvert Maintainer training. Four (4) employees received their Culvert Maintainer Certification during this period while three were recertified.</p>	Training and/or refreshers on SWPPPs, housekeeping, spill response, salt reduction, and erosion control will continue to be conducted periodically as needed.
Revised					

6.2	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><b>Goals Met:</b></p> <p>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.</p> <p>Herbicides are selectively used by commercial applicator to control invasive Japanese Knotweed at select locations.</p> <p>The Town is involved in the regional Salt Reduction Workgroup with USEPA, NHDES, NHDOT, FHWA, and UNH-T2. Meetings include updating Salt Reduction Plans, sector allocation, and evaluation of BMPs. 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.
Revised					

**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 13 (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 meetings with NHDES and other stakeholders, and hosted meetings and training sessions at the Derry Town Hall.</p> <p>The town is maintaining a net reduction in the 5-year and 10-year running average over the last 5 years through 2015 compared to historical averages. The allocation per year is based on the reported Weather Severity Index (WSI). The severity of the 2015-2016 winter season resulted in a lower than anticipated quantity of salt used during the most recent season. Comparable decreases were realized state-wide. The WSI for the 2015-2016 season is not available at this time.</p> <p>The SRP was revised to include next round purchase and implementation of Automatic Vehicle Location Systems</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>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 Town began stream testing following the Volunteer River Assessment Program and Volunteer Stream Assessment Program. With the assistance of Endicott College student intern, the Town started testing various streams and surface water bodies for various field parameters including DO, pH, Conductivity, and Turbidity.	The Town plans to continue the stream testing with the assistance of the BLIA Stream Teams as well as begin 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>	(%)	<b>(see comment)</b>
▪ material collected	(tons or gal)	14 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)	(#)	10
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 &gt; 1-acre)</i>	(#)	1

## 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	(#)	219 (this period)*
Storm drain cleaned	(LF or mi.)	unknown
Qty. of screenings/debris removed from storm sewer infrastructure <b>(*estimated)</b>	(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) ( <b>Streets w/ closed drainage systems only</b> )	(times/yr)	1/year
Average frequency of street sweeping (commercial/arterial or other critical streets) ( <i>weekly April-Nov.</i> )	(times/yr)	35/year
Qty. of sand/debris collected by sweeping ( <b>*estimated</b> )	(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
<b>**Mechanical street sweepers contracted out**</b>		

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 2014-2015 winter season was unusually severe compared to the typical historic winter weather conditions. These unusual conditions included several significant storms with record snowfall amounts and extended periods of extremely cold temperatures below which typical deicing (i.e., salt) are effective. (CaCl <sub>2</sub> , CMA, Kac, and KCl were not used)	(2500 Tons)  (100 Tons)	% NaCl % MgCl <sub>2</sub> % Sand	96%*  4%*
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. Due to severity of the past two winters there was a considerable increase in salt application this past season compared to the unusually mild winter two years before. However 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 <b>*New storage and loading facility completed in 2008</b>	(y/n)		NA*