

Municipality/Organization: GREENLAND, NH

EPA NPDES Permit Number: NHR041009

MaDEP Transmittal Number: W-

**Annual Report Number
& Reporting Period:** No. 9: March 2012March 2013

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Karen Anderson Title: Town Administrator

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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: Karen M. Anderson

Title: Town Administrator

Date: April 25, 2013

Part II. Self-Assessment

The Town of Greenland recognizes the importance of the MS-4 Permit and has been diligent to insure that the town residents and developers are in compliance with all aspects. Our ordinances have been in place for several years and have been improved upon over the past few years. The quality of the storm-water plans that we require from property owners for development have been improving as well. Greenland does not have a public works staff and must rely on contractors for our snow removal, salt application, catch basin cleaning and road construction.

In addition to our routine education and maintenance for storm water requirements, this year was focused on the use of fertilizers and pesticides on town green areas. The Town of Greenland was the lead agency in a grant from the NH Coastal Program to develop a best management practices manual for the maintenance of recreation fields and green spaces, with a particular emphasis on the amount of nitrogen being applied. The project was deemed successful and many towns were able to learn when and if fertilization is even needed for fields. The public was aware of the program through the use of large signs at the fields that stated "Clean Water – One Field at a Time" and explained the steps that were being taken to reduce fertilization.

The Planning Board had budgeted funds to review and improve all of the storm water ordinances, however that project was delayed until the new regulations were released in order to insure that any changes were taken into account.

A group of volunteers were trained to do water samples for the town and a series of samples at outfalls were taken during the summer. The test results were very good and when one outfall had an abnormally high level of bacteria we were able to quickly determine it was from pet waste. The property owners around the catch basin were notified and provided with additional information. The subsequent test at the same location resulted in a normal reading at the same site.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Years
GNI-001 Revised	Participation in Household Hazardous Waste Collection programs <i>Continue participation and Improve notifications about HHW Collection dates</i>	Karen Anderson, Town Administrator Karen Anderson, Town Administrator	Number of residents participating Increase in number of residents participating	Collection was held in May & September of 2011- in cooperation with the City of Portsmouth. Advertising and participation expanded. Collection containers have been added at Transfer Station for mercury products. <i>COMPLETED</i> In 2012 the town added a wooden shed, designated for the collection of batteries, thermostats and mercury items to better segregate them. The fees for those items were also eliminated in an effort to further encourage the proper disposal.	Continue to utilize town website, newsletter and media to advertise collection and prepare flyers to be distributed at transfer station, noting date and time and importance of proper disposal of hazardous waste. Maintain options for convenient disposal at Transfer Station for hazardous materials.
GNI-002 Revised	Distribution of stormwater information at transfer station and community picnic. <i>Distribution of stormwater educational information to the members of town land use boards and code enforcement officials</i>	Town Administrator Karen Anderson Town Administrator	Distribution of 1000 flyers Distribution of 1300 flyers; children's activities at community picnic with Enviroscope.	Flyer was developed and distributed at Transfer Station, at Community Picnic event and posted on the town website. Enviroscope was used for demonstrations during community day with 125+ residents and children participating. 1700 flyers were distributed, 285 coloring books were distributed to children. 650 dog waste bags with informative material were distributed to dog owners when registering their dogs in April, 2008. <i>COMPLETED</i> In 2012 the town prohibited residents from walking dogs within any of the town cemeteries as a result of increased pet waste in those areas	Increased locations for pet waste disposal stations, education to increase to limit the amount of trash placed in the receptacles.. Information will be continue to be distributed to all dog owners when they register their dogs in April with the Town Clerk.

GN1-003 Revised	Section in Town Annual Report	Karen Anderson Town Administrator	Publication of page in town report Information was included in Town Administrator's and Health Officer's report.	Information regarding stenciling project and importance of stormwater management was published in annual town report. <i>COMPLETED</i> In addition to the article in the town report, Educational articles were also included in the town's quarterly newsletter in 2012.	Information will continue to be published, with more emphasis placed on the actions residents can take.
GN1-004 Revised	Participate in stormwater video prepared by RPC if requested. <i>Advertise showings of completed video.</i>	Planning Board Chairman	Participation as requested.	Video was prepared through grant to Seacoast Stormwater Coalition. <i>COMPLETED</i>	Town does not have capability to broadcast on independent cable channel. Notice of broadcast dates of nearby city can be posted on Greenland website.
GN1-005 Revised	Include stormwater section on town website when developed. <i>Update stormwater section on town website</i>	Karen Anderson Town Administrator	Annual update of information	Information is posted on website. <i>COMPLETED</i>	Continue to update information and make efforts to draw residents attention to it.

1 a. Additions

GN1-006	Prepare information on stormwater management activities for local newspapers, focusing on residential activities such as car washing and fertilization of lawns.	Karen Anderson Town Administrator	Press releases published	Information was published requesting volunteers to assist with marking storm drains in local newspapers and conservation organization newsletter. Press releases were published thanking volunteers for their assistance. Newspaper articles ran about the pet waste disposal campaign. <i>COMPLETED</i>	Ongoing efforts to keep the media supplied with material that will remind residents of safe practices. As a result of the ice storm and the changed drainage pattern in many areas from storm debris, information has been publicized for residents to clear debris and maintain natural drainage patterns so that driveway runoff will channel and filter correctly before reaching any water body. Media efforts in 2012 were focused on the Green Spaces grant.
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2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
GN2-001 Revised	Storm drain stenciling <i>Storm drain marking</i>	Karen Anderson Town Administrator	Marking of storm drains	100% completion of project. Laminated markers were adhered to the curb or grate of all catch basins noting if the outfall drained to the bay or wetlands. <i>COMPLETED</i>	Monitor markers to see if they are all still present and retaining colors/text.
GN2-002 Revised	Public Meeting to discuss program	Board of Selectmen	Holding meeting annually.	Stormwater Management is highlighted during the annual public hearing for budget and annual town meeting. Topic was discussed at several Board of Selectmen's meetings, with the focus on the Pet Waste campaign in 2008. <i>COMPLETED</i>	A new committee is assisting in getting information out to businesses and students. Newspaper was produced by Conservation Comm. And distributed to all households.

2a. Additions

GN2-003	Signage at park locations for dog waste reminders.	Town Administrator		Five signs and two pet waste stations have been installed at recreation fields and residential areas for public use. <i>COMPLETED</i>	Maintenance of the signs and education about the dangers of improperly disposing of pet waste will be ongoing. One pet waste station was vandalized during 2012 and has not been replaced at this time. Additional signage "Be a Responsible Pet Owner" has been installed at parks.
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3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
GN3-001 Revised	Maintain map of stormwater sewers	Robert Cushman, Building Inspector	Annual update of maps	Maps were updated as each subdivision or drainage change was made. COMPLETED A GPS unit was purchased for more accurate locations of drainage system components.	Continue to update maps and improve accuracy with the requirement that developers provide map changes in a digital format.
GN3-002 Revised	Review municipal ordinances for means of prohibiting illicit discharges of pollutants to stormwater system <i>Thoroughly review and reorganize ordinances.</i>	Karen Anderson Town Administrator Karen Anderson and Wallace Berg, Health Officer	Approved ordinances	100% complete, required ordinances are adopted. COMPLETED	Refine ordinances and expand beyond minimum requirements. Continue participation with the Seacoast Stormwater Coalition to stay up to date on regulations and best management practices. Ordinances are being compared to model ordinances that are being put together by the State and a complete reorganization of the ordinances is taking place it consolidate the ordinances into one section to provide a comprehensive stormwater guide. Planning Board is currently reviewing ordinances for further refinement. Work on the ordinances was delayed in 2012 in anticipation of the new regulations being released.

3a. Additions

GN3-003	Screen outfalls for illicit connections	Health Officer, Town Administrator	Screen all outfalls by Fall 2007	Complete screening outfalls with GPS effort by Fall 2007. COMPLETED	Assistance was provided through EPA for the GPS work. No connections have been found for two years.
GN3-004	Screening and testing at outfalls	Town Administrator	Ongoing	ONGOING – One discharge discovered and corrective actions being taken. COMPLETED Greenland has partnered with UNH for a comprehensive monitoring and testing for selected outfalls. A volunteer group conducted a series of testing throughout the summer of 2012 and the test results indicated no significant problems or areas needing remediation.	Test results have not indicated contaminants, although it was discovered that a resident was disposing of yard waste too close to an outfall and that has been corrected.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Years
GN4-001	Review municipal land use ordinances for existing control mechanisms; recommend additional measures if warranted.	Building Inspector, Town Administrator	List of ordinances present and list of what may be needed.	Ordinances are in place for run-off control. <i>COMPLETED</i>	Prepare educational brochure for contractors to clearly show their requirements after the final regulations are confirmed.
Revised					
Revised					

4a. Additions

GN4-004	Establish confidential reporting procedure for residents to report non-compliant activities	Town Administrator, Building Inspector, Health Officer	Establish before publication of 2007 town report	Use of email link for violations established rather than telephone hot line. health@greenland-nh.com No complaints were received during permit year.	Establish action plan on complaints. No complaints have been received this year.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
GN5-001	Review of municipal land use ordinances for existing control mechanisms; recommend additional measures if warranted.	Karen Anderson Town Administrator Robert Cushman, Building Inspector	Inspected new development sites for compliance and determined that Greenland's ordinances were effective.	<i>COMPLETED – ONGOING INSPECTIONS</i> Commercial development installed pervious pavement for parking lot on voluntary basis and effectiveness is being monitored.	Inspections post-development will continue to insure that required drainage culverts are being properly maintained and silt is not getting into system. Road shoulders will be inspected for evidence of erosion.
	Revised				

5a. Additions

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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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities –
GN6-001 Revised	Clean Catch basins and storm drains annually	Karen Anderson Town Administrator	Catch basins are clean and operating correctly. Cleaning is scheduled and funded.	Catch basin cleaning is contracted annually and was completed in May, 2010. All catch basins were cleaned, material was disposed of on town gravel area, away from any water body.	Greenland will comply with the regulations for catch basin cleaning in 2013 as determined. The draft permit increases our frequency from once to twice per year due to our proximity to Great Bay. Culvert maintenance was ongoing in 2012 with several culverts reshaped and cleared.
GN6-002 Revised	Employee Training Program	Karen Anderson, Town Administrator	Insure adequate training for employees.	The Town of Greenland has two employees involved with stormwater management, the Town Administrator and Building Inspector. Both attend trainings to completely understand the requirements.	Town Administrator will continue attending monthly meetings with the Seacoast Stormwater Coalition, working on a BMP manual and keep up to date on information from the EPA. Materials will be collected and organized to provide reference documents for residents and builders. The Building Inspector will continue to attend meetings to be able to detect violations and insure compliance with existing regulations. The Health Officer has become very involved with the reorganization of all water related ordinances and will be attending an IDDE training with the Administrator in June.

6a. Additions

GN6-03	Drainage Improvements	Karen Anderson, Town Administrator	Installation of Bio-retention ponds	Drainage in proximity of the town office was changed from a catch basin, [pipe system to two bio-retention ponds on either side of the municipal complex. The work has been completed in conjunction with a road reconstruction.	Educational materials will be prepared to display adjacent to the retention areas for residents to read.
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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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Years
	N/A				
Revised					
Revised					
Revised					

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)	No
Annual program budget/expenditures	(\$)	\$10,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	90%
Stormwater management committee established	(y/n)	No
Stream teams established or supported (Funding provided for three test sites)	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Yes, 100%
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> ▪ days sponsored ▪ community participation ▪ material collected – data not provided (oil based paints, chemicals, wet cell batteries) 	(#) 2 (%) 255 (tons or gal) (y/n)	2 15% unknown Y
School curricula implemented –		

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
▪ Post-Development Stormwater Management				X
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				X

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	25
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified	(#)	0
Illicit connections removed	(est. gpd)	None
% of population on sewer	(%)	0%
% of population on septic systems	(%)	100%

Construction

Number of construction starts (>1-acre)	(#)	15
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	1
Fines collected	(# and \$)	None
Complaints/concerns received from public	(#)	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 – Major flooding occurrence in February, 2010	(gpy)	unknown

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1 per year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1 per year
Total number of structures cleaned	(#)	179
Storm drain cleaned	(LF or mi.)	None
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	Undetermined
Disposal or use of screenings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Sandpit for recycling
Cost of screenings disposal	(\$)	0
Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	0

Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	0
Qty. of sand/debris collected by sweeping	(lbs. or tons)	N/A
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	N/A
Cost of sweepings disposal	(\$)	N/A
Vacuum street sweepers purchased/leased	(#)	N/A
Vacuum street sweepers specified in contracts	(y/n)	N/A

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	100%
▪ Herbicides	(lbs. or %)	100%
▪ Pesticides	(lbs. or %)	100%

Anti-/De-Icing products and ratios	% NaCl % CaCl ₂ % MgCl ₂ % CMA % K _{ac} % KCl % Sand	75% varies depending on weather conditions
Pre-wetting techniques utilized	(y/n)	No
Manual control spreaders used	(y/n)	Yes
Automatic or Zero-velocity spreaders used	(y/n)	No
Estimated net reduction in typical year salt application	(lbs. or %)	Not determined
Salt pile(s) covered in storage shed(s)	(y/n)	Yes
Storage shed(s) in design or under construction	(y/n)	No

