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: Brian F. Goetz

Title: Deputy Public Works Director

Date: 4-28-16

Part II. Self Assessment

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

Part I. C.

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.

2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. This discussion must specifically identify control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.

Part I. D.

1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from the MS4.

2. Determine whether the TMDL includes a pollutant waste load allocation (WLA), BMP recommendations or other performance requirements for storm water discharges. This storm water WLA may be expressed in the TMDL as a gross allotment for the impaired water body.

The City remains committed to resolving whether these conditions have been met and believes that critical data is needed which would, among other things, help establish whether certain water bodies are in fact impaired and if so for which pollutants.

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2015 ANNUAL REPORT
BEST MANAGEMENT PRACTICES OBJECTIVES & STATUS REPORT

1. PUBLIC EDUCATION AND OUTREACH

The Permittee must implement a public education program to distribute educational material to the community. The public education program must provide information concerning the impact of stormwater discharges on water bodies. It must address steps and/or activities that the public can take to reduce the pollutants in stormwater runoff.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.A. Develop and distribute/post a minimum of 2,000 impressions via print, local TV, local radio or other appropriate media *during the life of the permit.* DPW	Stormwater information on the web, # of hits.	Over 1,727 visits were registered on the stormwater website during this reporting period.	Continue to update stormwater web page(s) to educate public on City initiatives, changing regulations and information residents need to know and will find useful.
	Produce education material for distribution. # of pamphlets /flyers/postings of information regarding stormwater.	Distributed *What is Stormwater* pamphlets at both HHW Collection event held in the Spring and Fall of 2015. A total of 565 cars attended the event and received a pamphlet.	Continue to distribute stormwater pollution prevention pamphlets at appropriate events.
		Maintained 17 signs posted throughout the City advising dog owners to pick up their pet's waste.	Continue to have signs posted and replace any damaged signs due to weather / exposure.
		Continuing to promote stormwater education and provide updates on the City website and in the e-newsletter.	Continue to include stormwater information in e-newsletter and web.

* Permit issued for 5 years. 2007 was the 5th year of the permit.
2008 permit requirements not yet stipulated by the EPA.
The City continues to operate under the provisions of the previous permit.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.B. Educate local residents participating in local government; groups; organizations. DPW	# of public events stormwater issues are presented and # of attendees.	The City personnel gave a tour to University of New Hampshire students and provided educational information on sustainable issues which included stormwater pollution prevention and current Best Management Practices.	Continue to make presentations as opportunities present.
		June, 2015, City staff held a public outreach event at the Moffatt Ladd House that included discussions water quality, efficency and stormwater information.	Continue involve and inform residents and local groups about the City's long term stormwater plans.
1.C. Educate the general public and public school children about the stormwater / sewer system, so that they understand the City water management systems and pollution issues DPW	# of presentation and # of attendees.	The City distributed approximately 600 stormwater management flyers to residents dropping household hazardous waste off during the collection days held in 2015.	Continue to support public school education and make presentations as funding allows and opportunities present.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	# of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion /addressing of stormwater issues.	1) Coordinated effort between the City and the Blue Ocean Society for volunteer litter and debris cleanup projects: Jenness Beach 1/10/15 2/14/15 3/14/15 4/11/15 5/9/15 6/10/15 7/8/15 8/12/15 9/12/15 10/10/15 11/14/15 12/12/15 North Hampton Beach 1/17/15	1) Continue assisting in clean-up activities at key locations throughout the City.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	# of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion /addressing of stormwater issues.	2) City staff presented hydrodynamic model to track water quality in the Great Bay Estuary. In 2015 DPW personnel participated as a member on the Board of Directors of the Southeast Watershed Alliance. 12 formal meetings of the Board of directors were held during this reporting period. There were two Alliance meetings held during this reporting period. The Alliance also maintains a website dedicated exclusively to its purposes. Activities are implemented based the following priority tasks: - develop consistent stormwater regulations and BMPs - Identify "hot spots", i.e. sources and land practices that degrade water quality along with locating funding sources to enable prerequisite research and corrective actions to be undertaken - Landowner outreach and municipal involvement in addressing the water quality benefits of routine septic system maintenance, proper use of fertilizers and low impact landscaping.	2) Ongoing participation in organization. Activities include: - further development and implement the initial priority activities - actively pursue funding resources, including public and private grants, in-kind services and municipal contributions - identify and develop additional priority activities, including long term planning and implementation actions

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	# of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion /addressing of stormwater issues.	3) City staff continues to meet with the Green Infrastructure Project Group. The City was awarded a grant from this group to install a demonstration Stormwater BMP rain garden at the City's snow dump. This project is in the design phase. Staff also participated in a regional workshop put on by the Green Infrastructure team to engage communities in efforts to create new GI installations. 4) Monitoring the function of the Coakley Road and Colonial Drive rain gardens in conjunction with the Hodgson Brook Advisory Committee. 5) Monitor the function of the rain garden at the High School. Replace plants as need to increase water quality to the surrounding watershed. 6) Design of a stormwater treatment system for the City's snow dump on Peirce Island is a joint effort with the City, NHDES and the University of New Hampshire Stormwater Center.	3) Working with UNH to complete design and installation of the rain garden at the snow dump. Continue to participate in the regional efforts as members of the Green Infrastructure Project. Continue to search out possible sites within the City to use GI to treat and improve stormwater quality. 4) Perform routine maintenance as necessary. Offered as Adopt a Spot locations with guidance from Candace J. Dolan of the Hodgson Brook Restoration Project. 5) Students at Portsmouth High School perform routine maintenance as necessary. 6) Completed system design and construct in conjunction with the Peirce Island Wastewater Treatment Facility upgrades.

2. PUBLIC INVOLVEMENT AND PARTICIPATION

The Permittee must provide opportunity for the public to participate in the development, implementation and reviews of stormwater management program(s).

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about stormwater management priorities and programs throughout the City. City Hall/DPW	Annual presentation to City Council on stormwater issues. Presentations will be made during official meetings, which are open to public attendance and televised on the gov. TV.	The City continues to evaluate the feasibility of a Stormwater Utility. After completing the Feasibility study and presenting the results in Dec. 2012 during "Stormwater 101" presentation, the City continues to evaluate options to meet stormwater regulations and to improve the quality of the City's stormwater while reducing pollution in the watershed. . A recording of this presentation is available on the City website and was also broadcast on local TV channel 22.	Develop strategies in order to continue researching the need to move forward with the stormwater program, and to understand the future options for reducing stormwater pollution with in the City and the vehicle to finance it.
	Collaborate with public and private entities to increase awareness, as well as improve on design and implementation of stormwater treatment issues related to building and site development design and construction throughout the City.	1) The Technical Advisory Committee (TAC) is responsible to review plans and proposals of public and private lands/construction projects and make recommendations to the Planning Board the Board; recommendations include appropriate stormwater features. In 2015 TAC met 24 times. A total of 22 sites were reviewed; of that a total of 18 sites included in depth discussion addressing stormwater issues and use of BMPs at the sites.	1) TAC to meet once a month and continue to incorporate stormwater pollution prevention recommendations to the Board when reviewing plans.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about stormwater management priorities and programs throughout the City. City Hall/DPW	Collaborate with public and private entities to increase awareness, as well as improve on design and implementation of stormwater treatment issues related to building and site development design and construction throughout the City.	3) Monitoring the function of the Coakley Road and Colonial Drive rain gardens in conjunction with the Hodgson Brook Advisory Committee. 4) Continue working in conjunction with the Pease Development Authority, Lonza and NHDES to improve the water quality of Hodgson brook by removing accumulated construction sediment from the existing drain structures, swales, and plunge pool(s) on Goose Bay Drive and Corporate Drive.	3) Perform routine maintenance as necessary. Include rain gardens in Adopt a Spot program with guidance from Candace J. Dolan of the Hodgson Brook Restoration Project. 4) To continue improvements to Hodgson Brook and the watershed by conducting routine maintenance of the stormwater drainage system that discharges into the brook.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about stormwater management priorities and programs throughout the City. City Hall/DPW	The Technical Advisory Committee (TAC) review and approval of construction projects from private contractors.	In 2015, 24 TAC meetings were held. A total of 22 sites were reviewed; of that a total of 18 sites reviewed included in-depth discussion addressing stormwater issues.	Continue Site Review process under the new Zoning Ordinance requirements.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.B. Maximize resources and effectiveness, and coordinate with neighboring communities occupying the same watershed for appropriate and feasible education and out reach. City Hall / DPW	# of meetings and/or coordinated efforts with the Stormwater Coalition and/or other organizations.	1) City staff attended quarterly meetings of the Seacoast Stormwater Coalition. Meetings held in 2015 were primarily focused on preparations for the new MS4 permit. 2) City staff continues to meet with the Green Infrastructure Project group. In 2015 four meetings were attended.	1) On-going attendance at meetings and initiative support. 2) Staff will continue to meet with and coordinate efforts with the GI project team. Work with Hodgson Brook team to identify locations for tree box filters and other appropriate GI projects.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The Permittee must develop, implement and enforce a program to detect and eliminate illicit discharges.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
3. B. Identify any illicit discharges and eliminate. DPW	Number of illicit discharges detected and/or eliminated.	1) Approximately 3,700 linear feet of new stormwater drain pipe was installed as part of projects in the West Road, incon 3C, Sheafe Streetand Chapel Street area. Worked with homeowners to connect sump pump and other stormwater connections (roof drains, floor drains, etc.,) to the new drainage systems. 2) Continue to employ the services of two summer GIS interns to survey, assess and update stormwater system assets in the City's current GIS system.	Complete the Lincoln Area Sewer Separation Contract 3C to reduce amount of stormwater going to WWTP; eliminate existing combined sewer lines in City Right-of-Way, and eliminate IDDE sump pumps from residential housing within construction area. Complete the installation of a new drainage outfall so that sewer separation can occur in the McDonough Street area. Continue to follow up investigations and enforcement of complaint phone calls and routine patrols. Continue to have summer GIS Interns work on surveys and assessments.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
3.B. Identify any illicit discharges and eliminate. DPW	Number of illicit discharges detected and/or eliminated.	4) No grease related discharges occurred in 2015.	Inspect and clean the downtown area before warm weather hits, tourist season begins and the streets become too crowded.
	Linear feet of sewer / storm drain system video taped / inspected.	A total of 47,000 linear ft. of cleaned and inspected sewer and drain line for in 2015.	Continue to inspect sanitary and storm sewers. In the course of inspections and identifying ID, work orders and/or projects will be under taken to implement corrective action/remove ID. Complete QA of mapping of the drain system in the State St. and Columbia St. area. Comprehensive II study will be performed by outside consultant in 2015.
3.C. Establish legal authority for enforcement actions. City Hall	The City to adopt means that provides enforcement mechanisms and penalties to halt illegal stormwater discharges and/or enhance stormwater / surface water quality.	No new Zoning Ordinance during this reporting period. The City continues to address the quality of surface waters and ground water by controlling the rate and volume of stormwater runoff under the zoning changes that were made in January of 2010. These requirements invite landowners/developers and contractors to work collectively for good alternatives and solutions, proposing BMPs for stormwater control incorporated in their request for developing properties. Further there is an enforcement provision to suspend a building permit providing compliance.	

4. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The Permittee must develop, implement and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance greater than or equal to 1 acre.

BMP / ID Responsible Party	**Measurable Goal**	**Progress on Goal(s)**	**Planned Activity for calendar year 2016***
4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites. City Hall / DPW	Require ESC plans for any land disturbance greater than 5,000 square feet. Site Review procedures to include stormwater pollution prevention activities.	The City developed and completed an undeveloped land assessment, which looked at all undeveloped City owned properties. Each property was assessed for its potential for stormwater treatment. A total of 91 properties were assessed and stormwater treatment opportunities identified. The report is on the City's website http://www.cityofportsmouth.com/planning/PULA_complete_final.pdf The City requires developers of property to enter into construction management and mitigation plan to reduce and coordinate construction impacts. Those plans include provisions relative to SWPPPs, catch basin cleaning, street sweeping, good housekeeping regarding loose debris.	Many of the undeveloped parcels are part of a drainage easement for stormwater structures built prior to the comprehensive stormwater regulations. These sites present an opportunity to upgrade old drainage structures and improve the water quality of wetlands and surface waters. Wherever non-point source discharges were identified in this inventory, there is the potential for installation of stormwater BMP (Best Management Practice). These management suggestions are for capital improvements which must be prioritized based on, budget constraints, and will often include developing partnerships with abutting property owners to implement these management suggestions.
4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites. City Hall / DPW	Enforce new ordinance / site review.	Pursuant to TAC meetings, the City may require an independent consulting engineer to inspect construction sites during a project. "Deemed necessary" is based upon the complexity, size of project and other variables discussed during the TAC meeting. In 2015, 24 TAC meetings were held. A total of 22 sites were reviewed; of that a total of 18 sites reviewed included in-depth discussion addressing stormwater issues.	TAC will continue to stipulate the need for stormwater treatment and that projects maintain a stormwater management plant if stormwater treatment is applicable to the project.

5. POST-CONSTRUCTION RUNOFF CONTROL

The Permittee must develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than 1 acre and discharge into the municipal system.

BMP / ID Responsible Party	**Measurable Goal**	**Progress on Goal(s)**	**Planned Activity for calendar year 2016***
5. A. Improve the quality of stormwater runoff by disconnecting impervious surfaces and installing and maintaining structural stormwater controls. DPW	# of structural controls installed.	1) Inspect and maintain 3 bio-retention tree wells on State Street. 2) Inspect and maintain the rain gardens in Coakley and Pannaway neighborhoods. 3) Inspect and maintain bio-retention tree boxes at 155 Parrot Ave (Middle School): 4) Inspect and maintain rain garden at Portsmouth High School. 5) Coordinated with Pease Development Authority and private business (Lonza) to perform maintenance and cleaning of drainage structures, drainage swales, and plunge pool(s) that discharge into the Hodgson Brook.	1) Inspect and maintain trees in tree boxes. 2) Perform routine maintenance as necessary. Add to Adopt a Spot program with guidance from Candace J. Dolan of the Hodgson Brook Restoration Project. 3) Inspect and maintain trees in tree boxes. 4) Maintenance performed by Students at Portsmouth High School. 5) To continue improvements to Hodgson Brook and the watershed by conducting routine maintenance of the stormwater drainage system that discharges into the brook. 6) Retrofitting structures on Corporate Drive Continue to incorporate structural BMPs and LID into construction projects throughout the City as appropriate.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
5.B. Improve the quality of stormwater runoff through inspection/follow-up/enforcement of private stormwater management plans. DPW	# of inspections / contact with / enforcement action taken with entities of private stormwater management plans	Build in-house program to manage the oversight of stormwater management plans in existence / approved by Planning Dept.; track stormwater management activities and follow up action as appropriate. The City has a program layer in VUEWorks to manage City owned stormwater devices.	Develop an inspection plan for privately installed and managed stormwater devices. Develop a layer in VUEWorks to manage the oversight of privately owned stormwater management devices.

6. GOOD HOUSEKEEPING

The Permittee must develop and implement a program with a goal of preventing and/or reducing pollutant runoff from municipal operations. The program must include an employee training component, including, at a minimum, maintenance activities for parks and open space, fleet and building maintenance, new construction roadway drainage and stormwater system maintenance. During the implementation of the stormwater management program, the Permittee must address recharge and infiltration for the minimum control measures as well as reasons for not implementing.

BMP / ID Responsible Party	**Measurable Goal**	**Progress on Goal(s)**	**Planned Activity for calendar year 2016***
6. A. Reduce the amount of nutrients and sediments entering receiving waters through education of municipal employees about spill prevention and control, vehicle washing, lawn activities, etc. DPW	# of in-house training sessions held and number of attendees.	DPW staff have been trained to manage stormwater infrastructure following Best Management Practices.	Continue to host and provide training for employees as appropriate and opportunities present.
	# of maintenance / inspection / cleanings of City's structural stormwater units.	Biannual inspection of stormwater treatment units.	Continue maintenance program of structures.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Storm/Sanitary Sewer Separation Quantify separation of sewers.	1) Approximately 3,700 linear feet of new stormwater drain pipe was installed as part of CSO sewer separation projects in the West Road, incon 3C, Sheafe Streetand Chapel Street area Worked with homeowners to connect sump pumps and other stormwater connections (roof drains, floor drains, etc.,) to the new drainage systems.	1) Complete the Lincoln Area Sewer Separation Contract 3C to reduce amount of stormwater going to WWTP; eliminate existing combined sewer lines in City Right-of-Way, and eliminate IDDE sump pumps from residential housing within construction area.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	# of storm drains fitted with storm drain sacks	Removed approximately 1 cubic yard of debris from 10 FABCO storm drain sacks and one catch basin filter in the downtown business district as part of an ongoing pilot project.	Monitor the effectiveness of the storm drain sacks and continue to perform routine maintenance.
	City to identify critical catch basins and frequency for cleaning.	Based upon inspection and cleaning tracking records through VUEWorks catch basin structures were identified for regular cleaning. 1,000 basins cleaned last fall by contractor.	Continue to use data base to optimize stormwater program. Based on field observations and conditions of the stormwater system a list of identified critical basins for regular cleaning to be developed. Presently the following areas have been identified: Downtown Miller Ave – b/w Lincoln Ave & South St Aldrich Rd at Boss Ave Bartlett St at Islington St Maplewood Ave at Fairview Dr.
		Continue to document the cleaning and inspections of drainage structures throughout the City with the use of VUEWorks.	Provide training as needed on use and data entry of forms; ensure users are utilizing tools provided to them in the field.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Miles of City streets swept.	All of Portsmouth's streets were swept twice, commencing May 2015 until completion Oct 2015. Approximately 280.47 tons of street sweepings were disposed of. Street sweeping 6 days/week in the downtown area commenced May 2015. Area of sweeping encompasses from Court St., to Middle St., to Marcy St., and Deer St.; and the 7 public parking lots. A second sidewalk sweeper was purchased by the City in the fall of 2014 and has been activated to help reduce debris entering the stormwater system and to improve stormwater quality.	Continue street and sidewalk sweeping program.
	Implement BMPs at snow disposal collection site.	Winter 2004/2005 a site was designated for temporary storage of snow pursuant to the City snow removal operations. The area is enclosed with silt fence and hay bales; debris in snow storage area is cleared prior to delivering snow to storage area; all subsequent debris accumulated in snow storage area is cleaned and disposed of. There are no wells at the snow storage collection site.	Continue maintaining the site and using for snow disposal. Continue to work with the University of New Hampshire Stormwater Center to design and implement the potential installation of a new BMP for stormwater treatment at the snow disposal collection site.
	City to incorporate stormwater treatment units in long term control plan/separation project.	Monitor the new sediment trap installed and connected to new and existing catch basins on Clough Drive, Brackett Road, and Haven Road.	Monitor the sediment trap and clean when appropriate in order to ensure sediment is not escaping from the trap into the surface water at Little Harbour.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s) Permit Year 5	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Number of activities the DPW coordinates or conducts to clean up public lands of debris / pollutants around sensitive watersheds/water bodies.	Coordinated effort between the City and the Blue Ocean Society to clean litter on Pierce Island. Throughout the year, volunteers organized and took part in cleaning debris on Pierce Island. A substantial amount of liter was removed from the area and kept out of City storm drains and open water bodies. (See #1D)	Continue to support initiatives.
6. C. Reduce the amount of hazardous waste being disposed of inappropriately through programs/services, education of municipal employees and local residents.	**i.** The number of household hazardous waste collection events and the volume (i.e. gallons) of household hazardous waste disposed (in accord with hazardous waste regs. and diverted from the landfill).	Household Hazardous Waste Events held May & October, 2015 – a total of 565 cars attended the events and over 6,100 gals of hazardous waste was collected. The Portsmouth Police Department has acquired a secure drop box for prescription drugs. The box is accessible 24 hours a day and the donation is anonymous. A drug take back event held in September by the Portsmouth Police Department yielded 145.2 pounds of prescription drugs.	Hold two Household Hazardous Waste Collections in 2016.

Moffatt – Ladd House Garden Day
June 2015

Stormwater Management

What is the City doing?

The City's Stormwater Management Program includes the following to better service Portsmouth water customers and protect our environment:

- **A completed a Stormwater Master Plan.**
- **A standalone stormwater ordinance** to protect our waterways
- **Site review and zoning ordinance revisions** including low-impact development requirements.
- **A partnership with Soak Up the Rain New Hampshire (SOAK),** a program managed by the NHDES with the goal of protecting and restoring clean water.
- **Installation of rain gardens** throughout the area, in which water filters through plants and soil layers before entering the groundwater system.
- **Tree box filter installations,** mini water quality filters installed beneath trees to control runoff while helping irrigate trees.
- **Increased green infrastructure improvements to City projects** with commitments to stormwater enhancements, aesthetics and regulations of the Clean Water Act.

Soak up the Rain New Hampshire

Tree box filter

Rain garden, Portsmouth High School

Sagamore Ave. Reconstruction with Porous Pavement

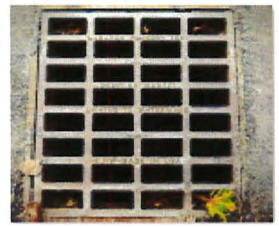
Resources:

- www.cityofportsmouth.com
- www.soaknh.org
- Portsmouth Department of Public Works: (603) – 427 - 1530

Stormwater Management

This flyer has been developed to provide the Portsmouth Water Division's customers with information about how stormwater is managed and suggested steps that individuals can take to protect and improve water quality.

What is stormwater?



Stormwater is precipitation that runs over the land surface (runoff) and does not infiltrate the ground. In the process it may pick up pollutants and deposit them into surface waters (rivers, lakes and oceans), which may create water quality impacts and siltation that could potentially damage aquatic habitats.

Why should we care?

Stormwater pollution creates water quality impacts to swimming, boating and aquatic habitats that can be mitigated or prevented with awareness and new approaches to stormwater management. These pollutants tend to come from eroding soils, fertilizers and lawn chemicals, pet waste, and trash and debris. As a result of stormwater and the increase in volume of surface waters, flooding can also occur. With flooding comes property and infrastructure damages.

> ***In the past, stormwater has been managed with the goals of controlling erosion and flooding, but the conventional approach has not been successful in either protecting water quality or accommodating flood waters. Recent changes in state and federal programs – and to some extent in local programs – recognize the shortcomings of the conventional approach and lay a course for a more up-to-date approach that can preserve both water quality and pre-development hydrologic conditions. The new approach employs tools such as low impact development techniques and stormwater utilities. Using these tools, it is possible to maintain water quality, ecosystem health and groundwater resources.***
>
> **– New Hampshire Water Resources Primer (2008)**

How can you help?

- Never pour hazardous materials into a storm drain
- Dispose of used motor oil, gasoline, antifreeze, cleaning agents, pesticides or fertilizers, paint and other hazardous agents in an appropriate manner – such as taking them to Household Hazardous Waste Days (held twice a year at Portsmouth's Department of Public Works)
- Do not sweep litter, sand, leaves or other materials into storm drains. Dispose of them in the trash or compost the material
- Never hose down a spill into a storm drain. Use absorbent towels or cat litter to clean up the spill and dispose of the material in the trash if it is not hazardous
- Detergents and chemical cleaners should not be used to wash sidewalks or driveways
- If you see a storm drain that is clogged please contact your respective Public Works Department and dispose of the material in the trash if it is not hazardous

What is Stormwater?

Stormwater runoff is water from rain or melting snow that doesn't soak into the ground.

In a forest, meadow, or other natural area, stormwater soaks into the ground and naturally filters through the soil.

When forests and meadows are developed, they are replaced with neighborhoods, shopping centers, and other areas that introduce impervious surfaces such as roofs, roads, parking lots, and driveways.

Impervious surfaces prevent rain or melting snow from soaking into the ground. This creates excess stormwater runoff and stormwater pollution.

Why is Stormwater a Problem?

Excess stormwater runoff and the pollution that it carries can cause many different problems including flooding, erosion, and water pollution. This can make the water unhealthy for fish and other animals to live in and unsafe for us to swim and play in.

What is Soak up the rain NH?

Soak Up the Rain (SOAK) Great Bay is a voluntary program with the goal of protecting and restoring clean water in the Great Bay estuary.

SOAK Great Bay assists home and property owners with the following:

- Determine if a property is creating stormwater runoff that may be impacting Great Bay.
- Make recommendations and a plan for simple improvements including low-cost, do-it-yourself stormwater practices like the ones described in the *New Hampshire Homeowner's Guide to Stormwater Management.*

Want to Learn More?

Contact the Great Bay Stewards to learn more about SOAK Great Bay and opportunities in your community at 603-501-0720 or laura.byergo@greatbaystewards.org or visit the Soak Up the Rain New Hampshire website at www.soaknh.org.

Soak Up the Rain Great Bay

YOUR LAND
YOUR WATER
YOUR SOLUTION

A Program of

Environmental Services

Great Bay Stewards

Soak up the Rain
NEW HAMPSHIRE

Photo source: Think Blue Maine

Pollution in stormwater is the primary cause of water contamination in New Hampshire

All of our homes have the potential to create stormwater runoff. This is because roofs, driveways, and even lawns can prevent rain water from soaking into the ground. The *New Hampshire Homeowner's Guide to Stormwater Management* was created for homeowners to learn the simple things that can be done to reduce the impacts of stormwater from our homes, while improving our properties at the same time.

Simple activities such as picking up pet waste, minimizing fertilizer use, and maintaining septic systems can reduce water pollution. Do-it-yourself stormwater practices like rain barrels, dry wells, infiltration trenches, and rain gardens can be built to further protect clean and healthy water.

To find out more about how you can soak up the rain contact the Great Bay Stewards at 603-501-0720 or laura.byergo@greatbaystewards.org.

Stormwater and Your Home: Where does it come from?

Extra water that would naturally soak into the ground comes from:

- Roofs
- Driveway and Walkways
- Decks and Patios
- Other hard surfaces

Stormwater carries pollutants that can harm our lakes, streams, estuaries. These pollutants can come from:

- Eroding soils
- Fertilizers and lawn chemicals
- Pet waste
- Trash and debris

What can you do to help reduce stormwater pollution?

- Install a rain barrel, rain garden, dry well, or other DIY stormwater practice to reduce the amount of stormwater your property creates. Visit www.soaknh.org for ideas.
- Use good housekeeping practices, like applying less fertilizer, sweeping your driveway, and picking up after your pets to reduce stormwater pollutants.
- Get involved with Soak up the Rain Great Bay and install a stormwater practive on your property or volunteer on a work crew to install a SOAK project. Contact the Great Bay Stewards for more information at 603-501-0720 or laura.byergo@greatbaystewards.org

YOUR LAND. YOUR WATER. YOUR SOLUTION.

2015 ANNUAL REPORT
BEST MANAGEMENT PRACTICES OBJECTIVES & STATUS REPORT

1. PUBLIC EDUCATION AND OUTREACH

The Permittee must implement a public education program to distribute educational material to the community. The public education program must provide information concerning the impact of stormwater discharges on water bodies. It must address steps and/or activities that the public can take to reduce the pollutants in stormwater runoff.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.A. Develop and distribute/post a minimum of 2,000 impressions via print, local TV, local radio or other appropriate media *during the life of the permit.* DPW	Stormwater information on the web, # of hits.	Over 1,727 visits were registered on the stormwater website during this reporting period.	Continue to update stormwater web page(s) to educate public on City initiatives, changing regulations and information residents need to know and will find useful.
	Produce education material for distribution. # of pamphlets /flyers/postings of information regarding stormwater.	Distributed *What is Stormwater* pamphlets at both HHW Collection event held in the Spring and Fall of 2015. A total of 565 cars attended the event and received a pamphlet.	Continue to distribute stormwater pollution prevention pamphlets at appropriate events.
		Maintained 17 signs posted throughout the City advising dog owners to pick up their pet's waste.	Continue to have signs posted and replace any damaged signs due to weather / exposure.
		Continuing to promote stormwater education and provide updates on the City website and in the e-newsletter.	Continue to include stormwater information in e-newsletter and web.

* Permit issued for 5 years. 2007 was the 5th year of the permit.
2008 permit requirements not yet stipulated by the EPA.
The City continues to operate under the provisions of the previous permit.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.B. Educate local residents participating in local government; groups; organizations. DPW	# of public events stormwater issues are presented and # of attendees.	The City personnel gave a tour to University of New Hampshire students and provided educational information on sustainable issues which included stormwater pollution prevention and current Best Management Practices.	Continue to make presentations as opportunities present.
		June, 2015, City staff held a public outreach event at the Moffatt Ladd House that included discussions water quality, efficency and stormwater information.	Continue involve and inform residents and local groups about the City's long term stormwater plans.
1.C. Educate the general public and public school children about the stormwater / sewer system, so that they understand the City water management systems and pollution issues DPW	# of presentation and # of attendees.	The City distributed approximately 600 stormwater management flyers to residents dropping household hazardous waste off during the collection days held in 2015.	Continue to support public school education and make presentations as funding allows and opportunities present.

BMP / ID Responsible Party	**Measurable Goal**	**Progress on Goal(s)**	**Planned Activity for calendar year 2016***
1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	# of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion /addressing of stormwater issues.	1) Coordinated effort between the City and the Blue Ocean Society for volunteer litter and debris cleanup projects: Jenness Beach 1/10/15 2/14/15 3/14/15 4/11/15 5/9/15 6/10/15 7/8/15 8/12/15 9/12/15 10/10/15 11/14/15 12/12/15 North Hampton Beach 1/17/15	1) Continue assisting in clean-up activities at key locations throughout the City.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	# of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion /addressing of stormwater issues.	2) City staff presented hydrodynamic model to track water quality in the Great Bay Estuary. In 2015 DPW personnel participated as a member on the Board of Directors of the Southeast Watershed Alliance. 12 formal meetings of the Board of directors were held during this reporting period. There were two Alliance meetings held during this reporting period. The Alliance also maintains a website dedicated exclusively to its purposes. Activities are implemented based the following priority tasks: - develop consistent stormwater regulations and BMPs - Identify "hot spots", i.e. sources and land practices that degrade water quality along with locating funding sources to enable prerequisite research and corrective actions to be undertaken - Landowner outreach and municipal involvement in addressing the water quality benefits of routine septic system maintenance, proper use of fertilizers and low impact landscaping.	2) Ongoing participation in organization. Activities include: - further development and implement the initial priority activities - actively pursue funding resources, including public and private grants, in-kind services and municipal contributions - identify and develop additional priority activities, including long term planning and implementation actions

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
1.D. Collaborate with public and private entities to maximize efforts of reducing contaminants from Portsmouth waterways. City Hall	# of initiatives the City leads, supports, is involved with, or has an employee acting as a representative on a committee ensuring the inclusion /addressing of stormwater issues.	3) City staff continues to meet with the Green Infrastructure Project Group. The City was awarded a grant from this group to install a demonstration Stormwater BMP rain garden at the City's snow dump. This project is in the design phase. Staff also participated in a regional workshop put on by the Green Infrastructure team to engage communities in efforts to create new GI installations. 4) Monitoring the function of the Coakley Road and Colonial Drive rain gardens in conjunction with the Hodgson Brook Advisory Committee. 5) Monitor the function of the rain garden at the High School. Replace plants as need to increase water quality to the surrounding watershed. 6) Design of a stormwater treatment system for the City's snow dump on Peirce Island is a joint effort with the City, NHDES and the University of New Hampshire Stormwater Center.	3) Working with UNH to complete design and installation of the rain garden at the snow dump. Continue to participate in the regional efforts as members of the Green Infrastructure Project. Continue to search out possible sites within the City to use GI to treat and improve stormwater quality. 4) Perform routine maintenance as necessary. Offered as Adopt a Spot locations with guidance from Candace J. Dolan of the Hodgson Brook Restoration Project. 5) Students at Portsmouth High School perform routine maintenance as necessary. 6) Completed system design and construct in conjunction with the Peirce Island Wastewater Treatment Facility upgrades.

2. PUBLIC INVOLVEMENT AND PARTICIPATION

The Permittee must provide opportunity for the public to participate in the development, implementation and reviews of stormwater management program(s).

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about stormwater management priorities and programs throughout the City. City Hall/DPW	Annual presentation to City Council on stormwater issues. Presentations will be made during official meetings, which are open to public attendance and televised on the gov. TV.	The City continues to evaluate the feasibility of a Stormwater Utility. After completing the Feasibility study and presenting the results in Dec. 2012 during "Stormwater 101" presentation, the City continues to evaluate options to meet stormwater regulations and to improve the quality of the City's stormwater while reducing pollution in the watershed. . A recording of this presentation is available on the City website and was also broadcast on local TV channel 22.	Develop strategies in order to continue researching the need to move forward with the stormwater program, and to understand the future options for reducing stormwater pollution with in the City and the vehicle to finance it.
	Collaborate with public and private entities to increase awareness, as well as improve on design and implementation of stormwater treatment issues related to building and site development design and construction throughout the City.	1) The Technical Advisory Committee (TAC) is responsible to review plans and proposals of public and private lands/construction projects and make recommendations to the Planning Board the Board; recommendations include appropriate stormwater features. In 2015 TAC met 24 times. A total of 22 sites were reviewed; of that a total of 18 sites included in depth discussion addressing stormwater issues and use of BMPs at the sites.	1) TAC to meet once a month and continue to incorporate stormwater pollution prevention recommendations to the Board when reviewing plans.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about stormwater management priorities and programs throughout the City. City Hall/DPW	Collaborate with public and private entities to increase awareness, as well as improve on design and implementation of stormwater treatment issues related to building and site development design and construction throughout the City.	3) Monitoring the function of the Coakley Road and Colonial Drive rain gardens in conjunction with the Hodgson Brook Advisory Committee. 4) Continue working in conjunction with the Pease Development Authority, Lonza and NHDES to improve the water quality of Hodgson brook by removing accumulated construction sediment from the existing drain structures, swales, and plunge pool(s) on Goose Bay Drive and Corporate Drive.	3) Perform routine maintenance as necessary. Include rain gardens in Adopt a Spot program with guidance from Candace J. Dolan of the Hodgson Brook Restoration Project. 4) To continue improvements to Hodgson Brook and the watershed by conducting routine maintenance of the stormwater drainage system that discharges into the brook.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.A. The City will involve stakeholder groups, including local governments, businesses, and citizens in making decisions about stormwater management priorities and programs throughout the City. City Hall/DPW	The Technical Advisory Committee (TAC) review and approval of construction projects from private contractors.	In 2015, 24 TAC meetings were held. A total of 22 sites were reviewed; of that a total of 18 sites reviewed included in-depth discussion addressing stormwater issues.	Continue Site Review process under the new Zoning Ordinance requirements.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
2.B. Maximize resources and effectiveness, and coordinate with neighboring communities occupying the same watershed for appropriate and feasible education and out reach. City Hall / DPW	# of meetings and/or coordinated efforts with the Stormwater Coalition and/or other organizations.	1) City staff attended quarterly meetings of the Seacoast Stormwater Coalition. Meetings held in 2015 were primarily focused on preparations for the new MS4 permit. 2) City staff continues to meet with the Green Infrastructure Project group. In 2015 four meetings were attended.	1) On-going attendance at meetings and initiative support. 2) Staff will continue to meet with and coordinate efforts with the GI project team. Work with Hodgson Brook team to identify locations for tree box filters and other appropriate GI projects.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The Permittee must develop, implement and enforce a program to detect and eliminate illicit discharges.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
3. B. Identify any illicit discharges and eliminate. DPW	Number of illicit discharges detected and/or eliminated.	1) Approximately 3,700 linear feet of new stormwater drain pipe was installed as part of projects in the West Road, incon 3C, Sheafe Streetand Chapel Street area. Worked with homeowners to connect sump pump and other stormwater connections (roof drains, floor drains, etc.,) to the new drainage systems. 2) Continue to employ the services of two summer GIS interns to survey, assess and update stormwater system assets in the City's current GIS system.	Complete the Lincoln Area Sewer Separation Contract 3C to reduce amount of stormwater going to WWTP; eliminate existing combined sewer lines in City Right-of-Way, and eliminate IDDE sump pumps from residential housing within construction area. Complete the installation of a new drainage outfall so that sewer separation can occur in the McDonough Street area. Continue to follow up investigations and enforcement of complaint phone calls and routine patrols. Continue to have summer GIS Interns work on surveys and assessments.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
3.B. Identify any illicit discharges and eliminate. DPW	Number of illicit discharges detected and/or eliminated.	4) No grease related discharges occurred in 2015.	Inspect and clean the downtown area before warm weather hits, tourist season begins and the streets become too crowded.
	Linear feet of sewer / storm drain system video taped / inspected.	A total of 47,000 linear ft. of cleaned and inspected sewer and drain line for in 2015.	Continue to inspect sanitary and storm sewers. In the course of inspections and identifying ID, work orders and/or projects will be under taken to implement corrective action/remove ID. Complete QA of mapping of the drain system in the State St. and Columbia St. area. Comprehensive II study will be performed by outside consultant in 2015.
3.C. Establish legal authority for enforcement actions. City Hall	The City to adopt means that provides enforcement mechanisms and penalties to halt illegal stormwater discharges and/or enhance stormwater / surface water quality.	No new Zoning Ordinance during this reporting period. The City continues to address the quality of surface waters and ground water by controlling the rate and volume of stormwater runoff under the zoning changes that were made in January of 2010. These requirements invite landowners/developers and contractors to work collectively for good alternatives and solutions, proposing BMPs for stormwater control incorporated in their request for developing properties. Further there is an enforcement provision to suspend a building permit providing compliance.	

4. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The Permittee must develop, implement and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance greater than or equal to 1 acre.

BMP / ID Responsible Party	**Measurable Goal**	**Progress on Goal(s)**	**Planned Activity for calendar year 2016***
4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites. City Hall / DPW	Require ESC plans for any land disturbance greater than 5,000 square feet. Site Review procedures to include stormwater pollution prevention activities.	The City developed and completed an undeveloped land assessment, which looked at all undeveloped City owned properties. Each property was assessed for its potential for stormwater treatment. A total of 91 properties were assessed and stormwater treatment opportunities identified. The report is on the City's website http://www.cityofportsmouth.com/planning/PULA_complete_final.pdf The City requires developers of property to enter into construction management and mitigation plan to reduce and coordinate construction impacts. Those plans include provisions relative to SWPPPs, catch basin cleaning, street sweeping, good housekeeping regarding loose debris.	Many of the undeveloped parcels are part of a drainage easement for stormwater structures built prior to the comprehensive stormwater regulations. These sites present an opportunity to upgrade old drainage structures and improve the water quality of wetlands and surface waters. Wherever non-point source discharges were identified in this inventory, there is the potential for installation of stormwater BMP (Best Management Practice). These management suggestions are for capital improvements which must be prioritized based on, budget constraints, and will often include developing partnerships with abutting property owners to implement these management suggestions.
4.A. Establish a set of minimum erosion and sediment control (ESC) requirements for construction sites. City Hall / DPW	Enforce new ordinance / site review.	Pursuant to TAC meetings, the City may require an independent consulting engineer to inspect construction sites during a project. "Deemed necessary" is based upon the complexity, size of project and other variables discussed during the TAC meeting. In 2015, 24 TAC meetings were held. A total of 22 sites were reviewed; of that a total of 18 sites reviewed included in-depth discussion addressing stormwater issues.	TAC will continue to stipulate the need for stormwater treatment and that projects maintain a stormwater management plant if stormwater treatment is applicable to the project.

5. POST-CONSTRUCTION RUNOFF CONTROL

The Permittee must develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than 1 acre and discharge into the municipal system.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
5. A. Improve the quality of stormwater runoff by disconnecting impervious surfaces and installing and maintaining structural stormwater controls. DPW	# of structural controls installed.	1) Inspect and maintain 3 bio-retention tree wells on State Street. 2) Inspect and maintain the rain gardens in Coakley and Pannaway neighborhoods. 3) Inspect and maintain bio-retention tree boxes at 155 Parrot Ave (Middle School): 4) Inspect and maintain rain garden at Portsmouth High School. 5) Coordinated with Pease Development Authority and private business (Lonza) to perform maintenance and cleaning of drainage structures, drainage swales, and plunge pool(s) that discharge into the Hodgson Brook.	1) Inspect and maintain trees in tree boxes. 2) Perform routine maintenance as necessary. Add to Adopt a Spot program with guidance from Candace J. Dolan of the Hodgson Brook Restoration Project. 3) Inspect and maintain trees in tree boxes. 4) Maintenance performed by Students at Portsmouth High School. 5) To continue improvements to Hodgson Brook and the watershed by conducting routine maintenance of the stormwater drainage system that discharges into the brook. 6) Retrofitting structures on Corporate Drive Continue to incorporate structural BMPs and LID into construction projects throughout the City as appropriate.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
5.B. Improve the quality of stormwater runoff through inspection/follow-up/enforcement of private stormwater management plans. DPW	# of inspections / contact with / enforcement action taken with entities of private stormwater management plans	Build in-house program to manage the oversight of stormwater management plans in existence / approved by Planning Dept.; track stormwater management activities and follow up action as appropriate. The City has a program layer in VUEWorks to manage City owned stormwater devices.	Develop an inspection plan for privately installed and managed stormwater devices. Develop a layer in VUEWorks to manage the oversight of privately owned stormwater management devices.

6. GOOD HOUSEKEEPING

The Permittee must develop and implement a program with a goal of preventing and/or reducing pollutant runoff from municipal operations. The program must include an employee training component, including, at a minimum, maintenance activities for parks and open space, fleet and building maintenance, new construction roadway drainage and stormwater system maintenance. During the implementation of the stormwater management program, the Permittee must address recharge and infiltration for the minimum control measures as well as reasons for not implementing.

BMP / ID Responsible Party	**Measurable Goal**	**Progress on Goal(s)**	**Planned Activity for calendar year 2016***
6. A. Reduce the amount of nutrients and sediments entering receiving waters through education of municipal employees about spill prevention and control, vehicle washing, lawn activities, etc. DPW	# of in-house training sessions held and number of attendees.	DPW staff have been trained to manage stormwater infrastructure following Best Management Practices.	Continue to host and provide training for employees as appropriate and opportunities present.
	# of maintenance / inspection / cleanings of City's structural stormwater units.	Biannual inspection of stormwater treatment units.	Continue maintenance program of structures.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Storm/Sanitary Sewer Separation Quantify separation of sewers.	1) Approximately 3,700 linear feet of new stormwater drain pipe was installed as part of CSO sewer separation projects in the West Road, incon 3C, Sheafe Streetand Chapel Street area Worked with homeowners to connect sump pumps and other stormwater connections (roof drains, floor drains, etc.,) to the new drainage systems.	1) Complete the Lincoln Area Sewer Separation Contract 3C to reduce amount of stormwater going to WWTP; eliminate existing combined sewer lines in City Right-of-Way, and eliminate IDDE sump pumps from residential housing within construction area.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	# of storm drains fitted with storm drain sacks	Removed approximately 1 cubic yard of debris from 10 FABCO storm drain sacks and one catch basin filter in the downtown business district as part of an ongoing pilot project.	Monitor the effectiveness of the storm drain sacks and continue to perform routine maintenance.
	City to identify critical catch basins and frequency for cleaning.	Based upon inspection and cleaning tracking records through VUEWorks catch basin structures were identified for regular cleaning. 1,000 basins cleaned last fall by contractor.	Continue to use data base to optimize stormwater program. Based on field observations and conditions of the stormwater system a list of identified critical basins for regular cleaning to be developed. Presently the following areas have been identified: Downtown Miller Ave – b/w Lincoln Ave & South St Aldrich Rd at Boss Ave Bartlett St at Islington St Maplewood Ave at Fairview Dr.
		Continue to document the cleaning and inspections of drainage structures throughout the City with the use of VUEWorks.	Provide training as needed on use and data entry of forms; ensure users are utilizing tools provided to them in the field.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s)	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Miles of City streets swept.	All of Portsmouth's streets were swept twice, commencing May 2015 until completion Oct 2015. Approximately 280.47 tons of street sweepings were disposed of. Street sweeping 6 days/week in the downtown area commenced May 2015. Area of sweeping encompasses from Court St., to Middle St., to Marcy St., and Deer St.; and the 7 public parking lots. A second sidewalk sweeper was purchased by the City in the fall of 2014 and has been activated to help reduce debris entering the stormwater system and to improve stormwater quality.	Continue street and sidewalk sweeping program.
	Implement BMPs at snow disposal collection site.	Winter 2004/2005 a site was designated for temporary storage of snow pursuant to the City snow removal operations. The area is enclosed with silt fence and hay bales; debris in snow storage area is cleared prior to delivering snow to storage area; all subsequent debris accumulated in snow storage area is cleaned and disposed of. There are no wells at the snow storage collection site.	Continue maintaining the site and using for snow disposal. Continue to work with the University of New Hampshire Stormwater Center to design and implement the potential installation of a new BMP for stormwater treatment at the snow disposal collection site.
	City to incorporate stormwater treatment units in long term control plan/separation project.	Monitor the new sediment trap installed and connected to new and existing catch basins on Clough Drive, Brackett Road, and Haven Road.	Monitor the sediment trap and clean when appropriate in order to ensure sediment is not escaping from the trap into the surface water at Little Harbour.

BMP / ID Responsible Party	Measurable Goal	Progress on Goal(s) Permit Year 5	Planned Activity for calendar year 2016*
6. B. Reduce the amount of nutrients and sediments entering receiving waters through mechanical and operational means.	Number of activities the DPW coordinates or conducts to clean up public lands of debris / pollutants around sensitive watersheds/water bodies.	Coordinated effort between the City and the Blue Ocean Society to clean litter on Pierce Island. Throughout the year, volunteers organized and took part in cleaning debris on Pierce Island. A substantial amount of liter was removed from the area and kept out of City storm drains and open water bodies. (See #1D)	Continue to support initiatives.
6. C. Reduce the amount of hazardous waste being disposed of inappropriately through programs/services, education of municipal employees and local residents.	**i.** The number of household hazardous waste collection events and the volume (i.e. gallons) of household hazardous waste disposed (in accord with hazardous waste regs. and diverted from the landfill).	Household Hazardous Waste Events held May & October, 2015 – a total of 565 cars attended the events and over 6,100 gals of hazardous waste was collected. The Portsmouth Police Department has acquired a secure drop box for prescription drugs. The box is accessible 24 hours a day and the donation is anonymous. A drug take back event held in September by the Portsmouth Police Department yielded 145.2 pounds of prescription drugs.	Hold two Household Hazardous Waste Collections in 2016.

Moffatt – Ladd House Garden Day
June 2015

Stormwater Management

What is the City doing?

The City's Stormwater Management Program includes the following to better service Portsmouth water customers and protect our environment:

- **A completed a Stormwater Master Plan.**
- **A standalone stormwater ordinance** to protect our waterways
- Site review and **zoning ordinance revisions** including low-impact development requirements.
- **A partnership with Soak Up the Rain New Hampshire (SOAK)**, a program managed by the NHDES with the goal of protecting and restoring clean water.
- Installation of **rain gardens** throughout the area, in which water filters through plants and soil layers before entering the groundwater system.
- **Tree box filter installations**, mini water quality filters installed beneath trees to control runoff while helping irrigate trees.
- **Increased green infrastructure improvements to City projects** with commitments to stormwater enhancements, aesthetics and regulations of the Clean Water Act.

Tree box filter

Rain garden, Portsmouth High School

Sagamore Ave. Reconstruction with Porous Pavement

Resources:

- www.cityofportsmouth.com
- www.soaknh.org
- Portsmouth Department of Public Works: (603) – 427 - 1530

Stormwater Management

This flyer has been developed to provide the Portsmouth Water Division's customers with information about how stormwater is managed and suggested steps that individuals can take to protect and improve water quality.

What is stormwater?

Stormwater is precipitation that runs over the land surface (runoff) and does not infiltrate the ground. In the process it may pick up pollutants and deposit them into surface waters (rivers, lakes and oceans), which may create water quality impacts and siltation that could potentially damage aquatic habitats.

Why should we care?

Stormwater pollution creates water quality impacts to swimming, boating and aquatic habitats that can be mitigated or prevented with awareness and new approaches to stormwater management. These pollutants tend to come from eroding soils, fertilizers and lawn chemicals, pet waste, and trash and debris. As a result of stormwater and the increase in volume of surface waters, flooding can also occur. With flooding comes property and infrastructure damages.

> ***In the past, stormwater has been managed with the goals of controlling erosion and flooding, but the conventional approach has not been successful in either protecting water quality or accommodating flood waters. Recent changes in state and federal programs – and to some extent in local programs – recognize the shortcomings of the conventional approach and lay a course for a more up-to-date approach that can preserve both water quality and pre-development hydrologic conditions. The new approach employs tools such as low impact development techniques and stormwater utilities. Using these tools, it is possible to maintain water quality, ecosystem health and groundwater resources.***
>
> **– New Hampshire Water Resources Primer (2008)**

How can you help?

- Never pour hazardous materials into a storm drain
- Dispose of used motor oil, gasoline, antifreeze, cleaning agents, pesticides or fertilizers, paint and other hazardous agents in an appropriate manner - such as taking them to Household Hazardous Waste Days (held twice a year at Portsmouth's Department of Public Works)
- Do not sweep litter, sand, leaves or other materials into storm drains. Dispose of them in the trash or compost the material
- Never hose down a spill into a storm drain. Use absorbent towels or cat litter to clean up the spill and dispose of the material in the trash if it is not hazardous
- Detergents and chemical cleaners should not be used to wash sidewalks or driveways
- If you see a storm drain that is clogged please contact your respective Public Works Department and dispose of the material in the trash if it is not hazardous

What is Stormwater?

Stormwater runoff is water from rain or melting snow that doesn't soak into the ground.

In a forest, meadow, or other natural area, stormwater soaks into the ground and naturally filters through the soil.

When forests and meadows are developed, they are replaced with neighborhoods, shopping centers, and other areas that introduce impervious surfaces such as roofs, roads, parking lots, and driveways.

Impervious surfaces prevent rain or melting snow from soaking into the ground. This creates excess stormwater runoff and stormwater pollution.

Why is Stormwater a Problem?

Excess stormwater runoff and the pollution that it carries can cause many different problems including flooding, erosion, and water pollution. This can make the water unhealthy for fish and other animals to live in and unsafe for us to swim and play in.

What is Soak up the rain NH ?

Soak Up the Rain (SOAK) Great Bay is a voluntary program with the goal of protecting and restoring clean water in the Great Bay estuary.

SOAK Great Bay assists home and property owners with the following:

- Determine if a property is creating stormwater runoff that may be impacting Great Bay.
- Make recommendations and a plan for simple improvements including low-cost, do-it-yourself stormwater practices like the ones described in the *New Hampshire Homeowner's Guide to Stormwater Management.*

Want to Learn More?

Contact the Great Bay Stewards to learn more about SOAK Great Bay and opportunities in your community at 603-501-0720 or laura.byergo@greatbaystewards.org or visit the Soak Up the Rain New Hampshire website at www.soaknh.org.

Soak up the Rain Great Bay

YOUR LAND
YOUR WATER
YOUR SOLUTION

A Program of

Soak up the Rain
NEW HAMPSHIRE

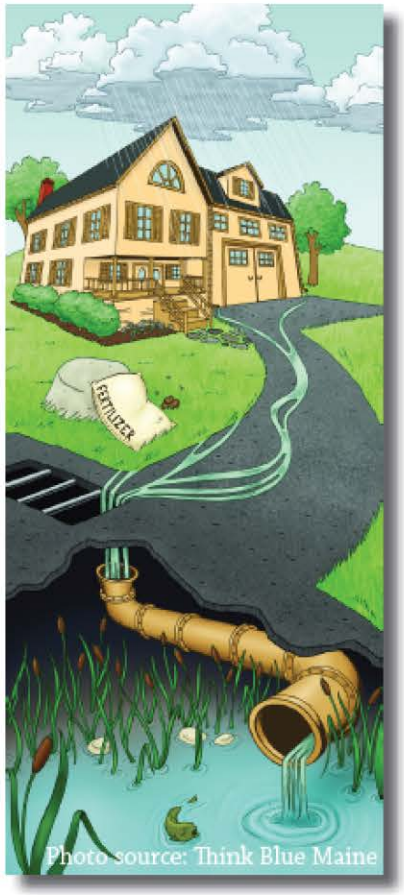


Photo source: Think Blue Maine

Pollution in stormwater is the primary cause of water contamination in New Hampshire

All of our homes have the potential to create stormwater runoff. This is because roofs, driveways, and even lawns can prevent rain water from soaking into the ground. The *New Hampshire Homeowner's Guide to Stormwater Management* was created for homeowners to learn the simple things that can be done to reduce the impacts of stormwater from our homes, while improving our properties at the same time.

Simple activities such as picking up pet waste, minimizing fertilizer use, and maintaining septic systems can reduce water pollution. Do-it-yourself stormwater practices like rain barrels, dry wells, infiltration trenches, and rain gardens can be built to further protect clean and healthy water.

To find out more about how you can soak up the rain contact the Great Bay Stewards at 603-501-0720 or laura.byergo@greatbaystewards.org.

Stormwater and Your Home: Where does it come from?

Extra water that would naturally soak into the ground comes from:

- Roofs
- Driveway and Walkways
- Decks and Patios
- Other hard surfaces

Stormwater carries pollutants that can harm our lakes, streams, estuaries. These pollutants can come from:

- Eroding soils
- Fertilizers and lawn chemicals
- Pet waste
- Trash and debris

What can you do to help reduce stormwater pollution?

- Install a rain barrel, rain garden, dry well, or other DIY stormwater practice to reduce the amount of stormwater your property creates. Visit www.soaknh.org for ideas.
- Use good housekeeping practices, like applying less fertilizer, sweeping your driveway, and picking up after your pets to reduce stormwater pollutants.
- Get involved with Soak up the Rain Great Bay and install a stormwater practive on your property or volunteer on a work crew to install a SOAK project. Contact the Great Bay Stewards for more information at 603-501-0720 or laura.byergo@greatbaystewards.org

YOUR LAND. YOUR WATER. YOUR SOLUTION.