

Municipality/Organization: Town of Kingston, MA

EPA NPDES Permit Number: MAR041041

MaDEP Transmittal Number: W-036193

Annual Report Number

& Reporting Period:

No. 11: March 13-March 14

NPDES Phase II Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Robert H. Fennessy, Jr.

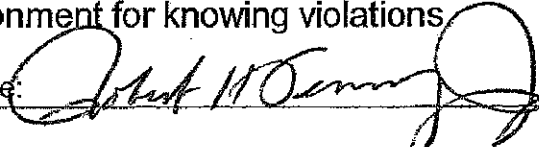
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Certification:

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: Robert H. Fennessy, Jr.

Title: Town Administrator

Date: 4/29/14

Part II. Self-Assessment

Permit Term 2013-2014

During the March 2013 to March 2014 permit term, the Town of Kingston continued to meet the requirements of its NPDES Phase II permit with assistance from Environmental Partners Group, Inc. (EPG), ATP Environmental, other agencies, and volunteers. EPG has a contract with the Town to submit a Notice of Intent (NOI) and Stormwater Management Plan (SWMP) under the new NPDES Phase II General Permit once the new rule is issued by the EPA. ATP Environmental has assisted the Town with all of the stormwater remediation grants and projects since 2011. Kingston had some major accomplishments during the 11th permit term and the most significant of those are listed directly below.

- At the April 2013 Annual Town Meeting, the Town adopted a local stormwater management by-law to regulate construction and post-construction stormwater runoff, as well as illicit connections. Two Attorney General-required By-Law corrections were adopted at the April 2014 Annual Town Meeting;
- At the end of June 2013, Kingston completed Phase I of a multi-phase project to mitigate stormwater impacts, improve water quality, and open more shellfish beds in the Kingston Bay. Phase I was funded by a Coastal Pollutant Remediation (CPR) grant in the amount of \$124,495.00 and included the successful installation of two raingardens at one site (Delano Avenue) and underground infiltration systems at two sites (Loring Road & River Street) to remediate impacts from stormwater pollutants emanating from the highest priority outfalls;
- In the Summer of 2013, the Town used NPDES public outreach and education funds to purchase 5,000 *Greenscapes* brochures on stormwater and mailed them out in all (residential & commercial) tax bills for the quarter;
- In September and October of 2013, the Town completed water quality sampling for bacteria and total suspended sediment in the Town Center area under the 2012 604(b) Water Quality Management Planning grant and continued work through the permit term on developing conceptual plans and preliminary plans for newly identified priority sites, as well as final plans for two previously identified sites that are the subject of the CPR'14 project. Additionally, a report was drafted in early 2014 detailing all of the work under the 604(b) grant and will soon be finalized for submittal to DEP when the contract ends in June 2014;
- In December 2013, the Town was awarded its second CPR grant in the amount of \$116,627.00 for Phase II of the multi-phase project to address remediation of priority outfalls that discharge bacteria & sediments to the Jones River and Kingston Bay. The Phase II stormwater BMP implementation project will complete the River Street mitigation by adding catchbasins, drain manholes, a raingarden, and underground infiltration. In addition, catchbasins, drain manholes, and underground infiltration systems will be implemented on Arrow Street and Marsh Road; and
- During the permit term, the Conservation Commission mailed 40 outreach and education packet packets to new homeowner's within Commission jurisdiction to provide information about wetlands, stormwater pollution prevention tips, organic land care, etc.

Further accomplishments by the Town of Kingston in the 11th year of implementing its Stormwater Management Plan are described in more detail below.

Stormwater Working Group

The informal Stormwater Working Group met several times, in whole or in part, in the 2013-2014 permit term for the following:

- Discussing with EPG the forthcoming expectations under the new NPDES General Permit;
- Discussing Kingston's Stormwater Management By-Law and development of supporting regulations;
- Securing and administering stormwater sampling and remediation grants/projects;
- Evaluating conceptual, preliminary, and final design plans with ATP Environmental for various stormwater mitigation proposals; and
- Working with the Greenscapes Program to conduct public outreach components of measurable goals.

Greenscapes Program

In the 11th permit term, the Town of Kingston Water Department continued to support the *Greenscapes* Program sponsored by the NSRWA (South Shore regional partner of the Massachusetts Bays Estuaries Program) and financed by Massachusetts Department of Environmental Protection, Massachusetts Environmental Trust and the Environmental Protection Agency. Through the *Greenscapes* Program, the MassBays South Shore Regional Coordinator conducted outreach to the Kingston Intermediate School (KIS) 5th grade science classes with their *Water All Around You Program* to provide students with the knowledge, tools, and desire to be future stewards of the environment. The 2010 movie, *The Jones River: A Duck's Eye View* (https://www.youtube.com/watch?v=Al-5q_ktq9s), by Alex Mansfield, JRWA Ecology Program Director, was shown to students to give them a visual tour of the river - dams, water quality issues, and all - in order to educate the students and promote restoration of the river. *Greenscapes* informational brochures were distributed to the public in the Town Hall while the *Be A Greenscaper* banner was prominently displayed in the main foyer of the Town Hall. The Kingston Conservation office regularly mails out the brochures to new residents who purchase property within the Commission jurisdiction and in the Summer of 2013 the Town sent out the *Greenscapes* stormwater brochure in all tax bills.

Website Announcements

In the 2013-2014 permit term Town departments continued to be very active in using the award-winning Town of Kingston website to post community announcements for a variety of things including pollution prevention tips, the availability of free compost at the transfer station, the sale of subsidized compost bins at the Department of Streets, Trees, & Parks (DSTPs), educational messages regarding stormwater, recycling, environmentally sensitive landscaping, etc. (See <http://www.kingstonmass.org> for more details). A stormwater webpage for posting more stormwater-related materials, including the Town's NPDES Phase II work and stormwater remediation work, is in development.

Household Hazardous Waste Day

Residents from the Town of Kingston and Duxbury participated in a Kingston-sponsored Household Hazardous Waste Day in May 2013 through a reciprocal arrangement that allows other member towns of the South Shore Recycling Cooperative (SSRC) to attend. Another is planned in Duxbury for SSRC member towns on May 10, 2014. This is a service the DSTP's provides to residents on an annual, rotating basis in partnership with the Town of Duxbury.

MS4 Operation & Maintenance

The Department of Streets, Trees & Parks (DSTP's) commenced their spring 2013 catchbasin, drainline & water quality structure cleaning with the vactor truck purchased in 2009 and in the 11th permit year cleaned approximately 90 structures, disposed of approximately 350 tons of material and spent approximately \$ 10,500.00 on disposal costs (total tonnage and cost includes street sweepings). The cleaning of stormwater structures, the tonnage of material, as well as the cost of disposal continues to be significantly less than the first 9 permit terms due to the elimination of sand from de-icing operations and to the DSTP's having a vactor truck that has cleaned years of accumulated sediment from a majority of catchbasins. The DSTP's calibrates their salt spreaders every year to ensure application is appropriately regulated. As part of the enhanced program to clean the town-wide stormwater system, the staff of the DSTP's has generated much valuable data on structure condition for future operation and maintenance needs, as well as for ensuring the Town meets its good housekeeping goals.

Collaborating with Neighbors for Water Quality Improvement Projects

In the 11th permit term, the Kingston Conservation Commission wrote a support letter for the Town of Duxbury's application to the Coastal Zone Management (CZM) Coastal Pollutant Remediation (CPR) Program to continue their ongoing work to improve water quality by installing best management practices (BMPs) on Bay Road where stormwater discharges to Kingston Bay. In addition, the Commission wrote a support letter for a JRWA Massachusetts Environmental Trust grant application for final design and permitting of fish passage to Silver Lake around the Forge Pond Dam. As part of the fish passage project, stormwater remediation is also proposed to capture and infiltrate unmitigated discharges to the Jones River headwater from Lake Street. The Town of Kingston is committed to continuing collaborations with our friends and neighbors to enhance our shared coastal resource waters.

Jones River Watershed Association (JRWA) & Jones River Landing (JRL) Ecology & Education Programs

Throughout 2013, JRWA/JRL held many educational events that reached nearly many adults and children, including students from area schools and Scout troops. The ecology programs and other activities of the JRWA directly benefit the residents of the town and greatly enhances the efforts of the Town of Kingston in getting the message of environmental stewardship of our wetlands, rivers, and bay out to the general public (See JRWA website at <http://www.jonesriver.org/> & 2013 Annual Report at <http://jonesriver.org/getfile/annual-reports/JRWAProgressReport2013.pdf> for more information). JRWA held its 9th annual herring count in 2013 and had the largest herring run since the count started in 2005 with 4,559 fish counted by volunteers.

Water Quality Monitoring

As mentioned above, in September and October 2013, Kingston conducted stormwater sampling of 10 outfalls discharging to Halls Brook and the Jones River under a DEP 604(b) grant. Samples were collected at 6 town-owned outfalls and 4 state-owned outfalls. Samples were analyzed for bacteria (fecal coliform & enterococci) and total suspended sediment (TSS). Data on state-owned outfalls will be shared with MassDOT's Impaired Waters Program and data from town-owned outfalls is being used to develop conceptual and preliminary plans for implementation of best management practices to remediate pollution from priority outfalls. The JRWA continued collaborations with DEP Bacterial Source Tracking Program to sample Tussock Brook and a tributary to Tussock Brook to investigate sources of bacteria as well as assess water quality around a tide gate scheduled for removal as part of a stream and habitat restoration project. The Division of Marine Fisheries (DMF) continued to conduct sanitary surveys for the shellfish beds in the bay and the Kingston Board of Health conducted regular sampling of water quality at swimming beaches. This monitoring data helps to inform the Town of Kingston as to potential stormwater pollutants and target areas of concern.

Collaborating with the Mass Bays Program on Green Infrastructure Handbook

The Mass Bays Program (MBP) got a grant from the EPA to develop a *Green Infrastructure Handbook* for municipal infrastructure, resource manager, and planning staff to guide them in planning for and conducting watershed assessments and using results to design and implement stormwater best management practices to reduce pollutants, as well as improve water quality throughout the Mass Bays Region. The Town of Kingston is a partner on the project and is involved with reviewing the draft and providing comments. This project is part of a transferability commitment made as part of a MBP Research and Planning grant received by the Town of Kingston.

Planned Activities 2014-2015

Planned activities for the 2014-2015 permit term include:

1. Submit NOI & SWMP under the new General Permit once issued;
2. Develop stormwater regulations for administration of the new stormwater management by-law;
3. Continue work to conduct water quality assessments to prioritize targets for pollutant remediation, work to implement BMPs, and administer existing grant funds while seeking further grant opportunities;
4. Develop stormwater webpage on Town of Kingston website in conjunction with the stormwater by-law and regulations, overall NPDES program, stormwater grants, and remediation projects;

5. Develop maintenance record database for enhanced management of the MS4 and for use in GIS;
6. Regularly update the online mapping website to increase awareness of the Town's MS4, among other things;
7. Work with the Planning Dept. and GIS consultant, to be hired in FY15, on enhancing the Town's GIS for the benefit of MS4 management, among other things;
8. Continuing to improve annual DSTP activities including researching salt use reduction strategies;
9. Work with DEP Division of Watershed Management to source track bacterial hotspot in Tussock Brook within the Lower Jones;
10. Continuing to expand use of LID in Kingston and on town-owned properties/projects;
11. Continuing Water Department support of the Greenscapes Program, working with Greenscapes on public education efforts;
12. Conducting workshops for single family homeowners such as Stormwater Management for the Home, Healthy Lawns & Landscapes, Landscaping in the Coastal Zone, etc. to educate residents about various ways to reduce stormwater pollution to wetlands & waterways;
13. Continue mailing stormwater brochures and conducting stormdrain stenciling to complete goals under existing General Permit;
14. Providing MassDOT water quality data for sampled outfalls from Route 3A and Route 3 so that they may begin to prioritize Kingston outfalls for mitigation in their Impaired Waters Program. Also, upload MassDOT GIS stormwater infrastructure data to Kingston GIS for use in ArcMap and in Kingston's OnlineGIS;
15. Continuing collaboration with JRWA on grant applications for stormwater/resource area improvements, protection of open space, community clean-up days, educational programs, restoration projects, dam removals, etc.;
16. Continuing partnership with KIS, SLRHS Conservation & Horticulture, as well as other community groups (Boy Scouts, Girl Scouts, etc.) for Town of Kingston stormwater and resource area improvement projects;
17. Continuing partnerships with other agencies and non-profits; and
18. Continuing partnerships with neighboring towns on grant proposals to improve water quality of the bay.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
# 1.1	Partnership with local watershed association	Conservation, DSTP's, Planning, BOS, Water Dept., Harbormaster, etc.	Collaborate on storm water management, water quality monitoring, herring count, educational programs, clean-ups, etc.	Supported JRWA grant applications for public education and outreach to schools & general public (environment, agriculture, climate change) (MBP, NSRWA, MET)	Continue cooperative efforts with JRWA outreach and education and grants in 2014 (MBP, NSRWA, MET, etc.)
Revised				<i>Water All Around You Program</i> at Kingston Intermediate School (JRWA, MBP, NSRWA, Greenscapes) Herring count at Water Dept. (JRWA & public) - largest herring run since 2005 start River & CoastSweep clean-up (JRWA, other partners & public)	Continue collaboration on this successful program Herring count in spring 2014 organized with Water Dept. and community (JRWA) Do collaborative clean – ups in 2014 (Coastsweep, etc.)
# 1.2	Storm drain stenciling	DSTP, Conservation, KIS, Stormwater Working Group	Re-start and finish town-wide stenciling with educational doorhangers & newspaper articles	No stormdrain stenciling in 2013	Continue work to expand stenciling effort to increase stormwater education efforts. DSTP's to assist on major roads.

Revised					May re-evaluate technique/methods – explore use of metal markers Write more newspaper articles on project, use website
# 1.3	Distribution of educational materials and offer of free workshops for residents/officials through Greenscapes Program	Kingston Water Dept., ConCom	Display and use these materials at Kingston Town Hall to encourage greenscapes in Kingston Install a Greenscape on town property Use town website for educational stormwater messages	Greenscapes Program (MBP, NSRWA, & other sponsors) ConCom regularly uses Greenscapes concepts to educate folks & ask them to Greenscape and use LID – Town installed two raingardens in 2013 (CZM), educational forum on ecological restoration, coastal stabilization, & invasive species management (JRWA, MBP, NSRWA, MIT) Mailed Greenscapes stormwater brochure in 2013 tax bills ConCom continued mailings to new residents living near wetlands and waterways Regular articles on river and watershed (JRWA)	Continue support of Greenscapes Program Raingarden retrofits at Town Landing in 2014 adds to Greenscapes demonstration landscapes on town-owned parcels for educational purposes
Revised					Create stormwater webpage in 2014 to increase public education Use newspaper (Kingston Reporter) to educate public about stormwater
# 1.4	Pet waste station installation at local conservation lands	Conservation, E.B. Sampson Fund (town grant program)		Maintained Pet Waste Stations installed on 5 conservation land parcels (Senior volunteer)	Install new pet waste station at Delano Beach and other public places
Revised					
# 1.5	Educational seminars for employees, residents, local engineers, developers, real estate agents on water quality, stormwater, conservation issues	Stormwater Working Group	Plan contents of workshops and set dates with schedule of seminars in tax bills, in paper, on website	No workshops in 2013, but continued advocating stormwater pollution prevention with various town departments and public Adopted stormwater by-law (ATM 2013) & revisions required by AG (ATM 2014)	Hold workshops Draft supporting stormwater regulations
Revised					
# 1.6	Annual clean-up of town properties/streets	Conservation, DSTP	Hold annual clean-up days	Various Boy/Girl Scout groups and volunteers cleaned up conservation land parcels & DSTP's disposed of rubbish (Boy/Girl Scouts & public)	Participate in Fall Coastsweep and expand beyond the coast to inland areas (ConCom, DSTP's, Recreation, community groups, volunteers, etc.)

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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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
# 2.1	Partnership with local schools	Recreation	Gray's Beach Bio-retention Demonstration & Maintenance	Maintained bio-retention areas in Fall 2013 (Recreation & Conservation)	Continue maintaining raingardens in Spring 2014 (Recreation & Conservation)
		ConCom, DSTP's	KIS Raingarden Demonstration & Maintenance	ConCom & DSTP's did not maintain raingardens in 2013	Conduct maintenance in 2014 with volunteer effort (volunteers)
		Water Dept.	Greescapes Program participation	<i>Water All Around You</i> program for KIS 5 th graders (MBP, NSRWA, & JRWA)	<i>Water All Around You</i> program for KIS 5 th graders (MBP, NSRWA, & JRWA)
Revised					
# 2.2	Partnership with watershed association	Planning, DSTPs, Harbormaster, Conservation	Continue collection of water quality data (JRWA)	Water quality sampling in Tussock Brook and tributary continued in Fall 2013 (DEP & JRWA)	Continue water quality sampling and engage public in sampling (DEP & JRWA)
		DSTPs, Conservation, Planning, Water, Health, Building	Stormwater Working Group	Contracted with EPG for new NOI & SWMP & SW By-Law (JRWA)	Submit new NOI & SWMP, draft SW regulations, consider targeted mailings. (JRWA)
		Water Dept.	Hold annual Herring counts & Greenscapes support	Trained volunteers to participate in 2013 herring count - largest since 2005 (JRWA)	Continue herring count & work with Greenscapes in new permit term (JRWA)
Revised				Climate Change in Your Backyard workshop series including restoration, coastal stabilization, & invasive species management (JRWA, NSRWA, MBP)	Support future educational forums by JRWA & others
# 2.3	Storm drain stenciling	Highway, Conservation, KIS, Stormwater Working Group	Organizing neighborhoods/volunteers to stencil storm drains	No stenciling in 2013	Seek other volunteers for stenciling in 2014
Revised					

# 2.4	Establishing formal Storm Water Management Task Force with citizen involvement	Selectmen and all other applicable boards	Establish Storm Water Management Task Force with regularly scheduled meetings and activities	Still informal Stormwater Working Group meetings with appropriate town officials (JRWA & other agencies)	Establish formal Stormwater Management Task Force with expanded involvement to include more town boards and citizens at large (EPG, JRWA, other towns input)
Revised					
# 2.5	Household Hazardous Waste Collection and Recycling Day	DSTP's and Town of Duxbury	Hold annual collection days Collect mercury-containing thermometer/thermostats throughout year	Successful collection day in Kingston held in spring 2013 that was well attended by Kingston residents (SSRC) DSTP's cont'd collecting mercury thermometers, thermostats and handing out non-mercury thermometers	Spring 2014 collection day in Duxbury for Kingston as well (SSRC) Town to continue program – posted on town website
# 2.6	Educational seminars, mailings, & other information for residents, local engineers, developers, real estate agents on water quality, stormwater, conservation issues	Stormwater Working Group	Plan contents of workshops and set dates. Advertise seminars in tax bills, in paper, & website. Expand educational outreach via mail website, mailings, etc.	No workshops in 11th permit term Advocated for stormwater pollution prevention with various town departments & public through public hearings & conservation related mailings to new residents	Hold workshops for general public Create stormwater webpage on town website
# 2.7	Annual clean-up days on town properties	Conservation, DSTP	Hold annual clean-up day	Various Boy/Girl Scout groups cleaned up conservation land parcels and DSTP's disposed of rubbish (Boy/Girl Scouts & public)	Work on coordinating more large scale clean-up days on town lands with various town groups such as Coastsweep and Beyond in Fall 2014 (JRWA & Public)
# 2.8	Form "Friends of Conservation Land" group	Conservation, Open Space Committee & DSTP's	Hold regular clean-up days and watch group to reduce vandalism, theft and littering of town conservation land where there are many wetlands and streams	Senior volunteer for conservation land maintenance Met individual interested starting a friends group for conservation	Facilitate more volunteer land stewardship and development of friends group to reduce illegal dumping on conservation lands (public)

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
# 3.1	Catch basin/outfall and sewer mapping to receiving waters	Planning, DSTP, Conservation	Mapping hotspots that are suspected to carry high pollutant loads	Contracted with EPG to update maps with new data, submit NOI, SWMP, adopt stormwater/IDDE by-law (ATM 2013)	Submit new NOI and SWMP & draft SW regulations to aid implementation of amended by-law (AG required amendments to by-law - ATM 2014)
Revised					
# 3.2	Sewering of densely developed areas and environmentally sensitive areas of town to reduce septic influence on water quality	Sewer Commission	Expand sewer capacity	Continued planning for sewer expansion with MEPA filing	Sewer Commission new leaching field area approved at ATM 2012 – will continue with sewer plant expansion plans
Revised					
# 3.3	Regulatory Review & Permit Enforcement	Selectmen, Planning, Building, Zoning, Conservation, DSTP's, BOH		Stormwater By-Law approved ATM 2013	Amended Stormwater By-Law ATM 2014 and drafting SW regulations in 12 th year
Revised					
# 3.4	Storm drain stenciling	DSTP, Conservation, Stormwater Working Group	Adopt a Storm Drain	Discussion of including this in storm drain stenciling efforts, but no progress made	Neighborhood representatives to monitor storm drains for illicit discharges – pursue this with stormdrain stenciling efforts
Revised					
# 3.5	Water Quality Monitoring	Planning, Conservation, Highway, Water, Harbormaster, Stormwater Working Group	Expand WQ monitoring to include surveying for illicit discharge detection	Completed 604b stormwater assessments in Fall 2013 - no illicit discharges found (DEP) Worked with DEP to sample in Tussock Brook and tributary – elevated bacteria levels found (DEP, JRWA)	Based on WQ analysis, prioritize outfalls for remediation Follow-up sampling to track bacteria to source in 2013 (DEP, JRWA) Pursue more grant funds for further WQ sampling

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
# 4.1	Regulatory Mechanisms	Selectmen, Planning, Building, Conservation, DSTP, Stormwater Working Group	Establish and implement local stormwater management by-laws and/or stormwater authority to increase construction runoff controls in design criteria	Adopted Stormwater Management By-Law (ATM 2013)	Amendments to Stormwater Management By-Law adopted April 2014 Draft & approve SW regulations and complete implementation (EPG, JRWA, public) Continue implementing & encouraging LID
Revised					
# 4.2	Site Plan Review	Planning, Conservation, Building, Zoning, BOH, Stormwater Working Group	Establish Phase II specific stormwater guidelines for review of site plans	Regularly require developers to obtain NPDES CGP for disturbance of 1 acre or more of land	Review in accordance with Stormwater Management By-Law once supporting regulations are approved
Revised					
# 4.3	Enforcement	Building, Planning, Zoning, BOH, DSTP, Conservation, Stormwater Working Group	Establish new site inspection forms, new procedures and fee/fine schedules for incorporating requirements of Phase II TMDLs on 303d waters	Stormwater Management By-Law adopted (ATM 2013) with enforcement provisions and fine schedule, but AG found problems with fining provisions. Proposed amendments to enforcement provisions of By-Law.	Amended Stormwater Management By-Law to fix enforcement provisions (ATM 2014) Work with Plymouth, Duxbury, MEP & DEP to develop TMDL for bay and develop land use management standards to work toward removing waterbodies from 303d list
Revised					

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
# 5.1	Regulatory Mechanisms	Selectmen, Town Administrator, Planning, Building, Conservation, DSTP	Implement local stormwater management by-law	Adopted Stormwater Management By-Law with enforcement provisions and fine schedule (ATM 2013)	Stormwater Management By-Law amendments approved (ATM 2014) (EPG)
Revised					
# 5.2	Site Plan Review/As-Built Review	Planning, Conservation, Building, Zoning, BOH, DSTP	Establish Phase II - specific stormwater guidelines and low impact development guidelines for review of site plans	Reviewing authority specified in By-Law adopted in 2013 GIS mapping will improve reviews	Draft Stormwater Management Regulations and finalize jurisdictional review provisions in regs. Continue work on town-wide GIS enhancements
Revised					
# 5.3	Enforcement	Building, Planning, Zoning, BOH, DSTP, Conservation	Establish new site inspection forms, new procedures and fee/fine schedules for incorporating requirements of Phase II	Finalized stormwater management by-law with enforcement provisions and fine schedule (ATM 2013) Continue to attach Operations & Maintenance Plans to Conservation Orders of Conditions and refer directly to the O & M Plan with specific conditions into perpetuity (as required under DEP stormwater policy) Continue requiring annual reports submitted to ConCom for stormwater maintenance post-construction	Adopted amendments to Stormwater Management By-Law to fix enforcement provisions (ATM 2014). Draft & adopt regs. (2014) Establish cash (instead of bond) surety with developers to create binding obligation to keep stormwater runoff onsite

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
# 6.1	Employee Training	Selectmen, DSTP, Water, Building, Planning, Conservation, Stormwater Working Group	Establish pollution prevention plan and good housekeeping procedures & schedules	Continued seeking training opportunities, but no training undertaken in 11th permit term	Plan to go to UNH Stormwater Center in 2014 with Supt. of Streets, Trees & Parks
Revised					
# 6.2	Improved Maintenance	DSTP, Water, Building	Increase frequency of maintenance and implement better storage practices	Vacuum truck cleaned ~90 structures in 2013-2014 & disposed of ~350 tons (including street sweepings) Annual street sweeping reduced through elimination of sand from de-icing practices	Work on database to track maintenance activities
Revised				Calibrate spreaders to reduce salt use	Continue to calibrate spreaders
# 6.3	Improved stormwater treatment	DSTP, Water, Conservation, Planning	Upgrade current systems in sensitive areas	Completed SW retrofits at 2 sites with grant funds (CZM, ATP) Received funding to finish retrofits at 1 site and implement at another (CZM, ATP)	Two more SW retrofits to be implemented in 2014 (ATP, CZM) Continue to seek funding to retrofit town-owned sites to improve stormwater treatment (ATP)
Revised					
#6.4	Inter-department education	Conservation, Building, Water, DSTP, Sewer, Zoning	Continue informal education	Continued communicating the importance of stormdrain protection during road work for water, sewer, & drainline work performed by the town and the use of enhanced erosion controls	Continue to be vigilant with informal inter-departmental education of stormwater impacts to waterways Seek formal training sessions for all dept's.
#6.5	Improved Recycling	BOS, DSTP's, Recycling Committee	New BMP	Transfer station redesigned in 2013 to improve recycling DSTP's continues to sell compost bins which will help in eliminating food waste - notice on town website	Continue to advocate for increased recycling Continue to encourage composting to eliminate food waste from the waste stream
#6.6	Stormdrain Stenciling	Stormwater Working Group, DSTP's	Start and finish town-wide stenciling with educational doorhangers & newspaper articles	No stormdrain stenciling in 11 th permit term	Work with community groups to continue stenciling project in 2014 Write more newspaper articles on project, use website

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 12
#7.1	Target 303d waterbodies for Water Quality Monitoring	Stormwater Working Group	Focus sampling on 303d impaired waterbodies to work toward removing them from 303d list	Completed 604(b) WQ sampling in Fall 2013 (DEP)	Seek grant funds to implement BMP retrofits at prioritized sites identified through 604(b) sampling (ATP & others)
Revised				Implemented SW retrofit systems at 2 town-owned sites in estuary (CPR, ATP)	Permit and implement the BMPs at 2 sites (ATP)
				Worked with DEP DWM to sample Lower Jones and found few hotspots (JRWA)	Conduct follow-up sampling with DEP around hotspots (JRWA)
#7.2	GIS Mapping	Stormwater Working Group	Complete mapping of stormdrain system and outfalls	Continued annual updates to OnlineGIS (CAI)	Continue to upgrade OnlineGIS with updated & improved datalayers
				Planning Board requested funding for 3 ArcMap software licenses & GIS training at in 11th permit term	Funding approved at ATM 2014 - seek training opportunities for staff to improve town-wide GIS mapping capabilities
Revised					
#7.3	Stormwater Modeling	Stormwater Working Group	Focus modeling on 303d impaired waterbodies to work toward removing them from 303d list as well as bay needing TMDL	Completed 604(b) sampling and continued stormwater modeling of SW system and priority outfalls in 303d bay & Jones River	Seek grant funds in 2014 for further modeling of subwatersheds of 303d bay and lower Jones

Part IV. Summary of Information Collected and Analyzed

The following assessments were conducted in the year 2013-2014:

1. Town of Kingston completed DEP-funded 604(b) stormwater sampling of 10 outfalls (6 town-owned, 4 state-owned) in town center (Halls Brook and Jones River), used analysis to prioritize outfalls for remediation, developed conceptual, preliminary, and final plans for BMP implementation;
2. JRWA & DEP Bacterial Source Tracking Program sampled Tussock Brook and its tributary around the tide gate in order to continue investigation of pollutant source and to establish long-term data for Tussock Brook stream and habitat restoration project;
3. Board of Health beach sampling summer swim season 2013; and
4. DMF/Harbormaster 2013 sanitary survey sampling of Kingston Bay.

Part V. Program Outputs & Accomplishments (OPTIONAL) * (Please see note below this section)

Programmatic

Stormwater management position created/staffed	(y/n)	n
Annual program budget/expenditures	(\$)	ATM2011 – \$ 23,350.00 for NOI, SWMP & By- Law. Remaining budget for education & outreach = \$ 1,564.00

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	-Many (website) -40 (Conservation mailings) -All (Mass Recycles) -Many more (JRWA Programs)
Stormwater management committee established	(y/n)	Y - Informal
Stream teams established or supported	(# or y/n)	JRWA
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	2 miles
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	11 (in SSRC – 1 in Kingston/Dux)
▪ community participation	(#)	1,794 (in SSRC)
▪ material collected	(tons or gal)	Cardboard – N/A Latex Paint – N/A Textiles > 474 tons (SSRC) Books – N/A
School curricula implemented	(y/n)	Y (Water All Around You)

Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	Amended 2014	x		
▪ Erosion & Sediment Control		x		
▪ Post-Development Stormwater Management	Amended 2014	x		
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	Amended 2014	x		
▪ Erosion & Sediment Control		x		
▪ Post-Development Stormwater Management	Amended 2014	x		

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	253
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	0
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	4%
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	26.0%
% of population on septic systems	(%)	74.0%

Construction

Number of construction starts (>1-acre)	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	95%
Site inspections completed	(# or %)	40
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public	(#)	10

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	95%
Site inspections completed	(# or %)	20
Estimated volume of stormwater recharged	(gpy)	75%

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	Once/year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	Once/year
Total number of structures cleaned	(#)	~90
Storm drain cleaned	(LF or mi.)	~700 LF
Qty. of screenings/debris removed from storm sewer <i>infrastructure (includes street sweepings)</i>	(lbs. or tons)	~350 tons
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Bourne landfill
Cost of screenings disposal <i>(includes street sweepings)</i>	(\$)	~\$ 10,500.00 @ \$30/ton

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1/year
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1/year
Qty. of sand/debris collected by sweeping <i>(includes storm sewer screenings)</i>	(lbs. or tons)	~350 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Bourne landfill
Cost of sweepings disposal <i>(includes storm sewer screenings)</i>	(\$)	~\$ 10,500.00
Vacuum street sweepers purchased/leased	(#)	1 purchased
Vacuum street sweepers specified in contracts	(y/n)	N, but will be for porous pavements

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

Anti-/De-Icing products and ratios (50% NaCl or CaCl ₂ with 50% sand, depending on temperature)	% NaCl	50%
	% CaCl ₂	50%
	% MgCl ₂	0
	% CMA	0
	% Kac	0
	% KCl	0
	% Sand	0
Pre-wetting techniques utilized	(y/n)	Y
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	Y(3 town trucks)
Estimated net reduction in typical year salt application	(lbs. or %)	0%(researching)
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	N