

Municipality/Organization: Town of Kingston, MA

EPA NPDES Permit Number: MAR041041

MaDEP Transmittal Number: W-036193

Annual Report Number
& Reporting Period: No. 10: March 12-March 13

NPDES Phase II Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Nancy M. Howlett Title: Acting Town Administrator

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Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: Nancy M. Howlett

Title: Acting Town Administrator

Date: April 30, 2011

Part II. Self-Assessment

Permit Term 2012-2013

During the March 2012 to March 2013 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) as well as 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. Kingston had some major accomplishments during the 10th permit term and the most significant of those are listed directly below.

- The Town worked throughout 2012 to finalize a local stormwater management by-law to regulate construction and post-construction stormwater runoff as well as illicit connections - the by-law was approved at the April 2013 Annual Town Meeting and we await approval from the Attorney General;
- In June 2012, the Kingston Conservation Agent and the Duxbury Conservation Administrator were jointly awarded a Gulf of Maine Visionary Award for collaborating on stormwater remediation projects to improve water quality in the bay. In August 2012, the Town of Kingston was awarded a \$48,620.00 MassDEP 604(b) Water Quality Management Planning grant for conducting water quality sampling within the town center area of Kingston and for finalizing engineering plans for stormwater remediation at priority sites identified through a 2011 Massachusetts Bays Research and Planning grant. The 604(b) grant also includes funding for identification of new outfalls requiring remediation as well as preliminary plan development. Additionally, in November 2012, Kingston was awarded a \$124,495.00 EEA Coastal Pollutant Remediation (CPR) grant to implement priority stormwater BMPs at two locations that discharge stormwater to the Jones River estuary. The CPR implementation project is Phase I of a multi-phase project to mitigate stormwater impacts, improve water quality and open more shellfish growing areas in Kingston Bay;
- Kingston continued to work in 2012 with MassDEP Division of Watershed Management (DWM) Bacterial Source Tracking (BST) Program and the Jones River Watershed Association (JRWA) to investigate high bacteria counts around the area of the Tussock Brook tidegate. Some follow-up sampling will likely occur during summer 2013;
- In the 2012-2013 winter season, Kingston eliminated sand from de-icing operations in order to reduce sedimentation to the MS4, wetlands, and waterways as well as reduce sand recovery, screening, and disposal costs. The Town is researching salt reduction strategies as well;
- In April 2012, Kingston's OnlineGIS was launched on the town website where the public can access the MS4 map layer (http://www.kingstonmass.org/index.asp?Type=B_BASIC&SEC={05A64263-FCEB-4C0B-AB24-20DC59821144}); and
- Also in April 2012, Kingston worked with MassDEP to hold a well-attended regional stormwater management workshop at Kingston Town Hall.

Further accomplishments by the Town of Kingston in the 10th 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 2012-2013 permit term for the following:

- Contracting with EPG for filing a new NOI and SWMP under the new NPDES General Permit;
- Finalizing Kingston's Stormwater Management By-Law;
- Securing and administering stormwater sampling and remediation grants;
- Implementing LID stormwater retrofits at Gray's Beach; and
- Working with the Greenscapes Program to plan public outreach components of measurable goals.

Greenscapes Program

In the 10th 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. *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 *Greenscapes* brochures to new residents who purchase property within the Commission jurisdiction. Through the *Greenscapes* Program, the MassBays South Shore Regional Coordinator and the JRWA Ecology Program Director 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. In addition, the Conservation Commission used NPDES public outreach and education funds to purchase 5,000 *Greenscapes* brochures that will be mailed in tax bills in Summer 2013.

Website Announcements

In the 2012-2013 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 such as the availability of free compost at the transfer station, the sale of subsidized compost bins at the DSTPs, educational messages regarding stormwater, recycling, environmentally sensitive landscaping, etc. (See <http://www.kingstonmass.org> for more details). Development of a stormwater webpage for posting is in the works.

Household Hazardous Waste Day

Residents from the Town of Kingston and Duxbury participated in a Duxbury-sponsored Household Hazardous Waste Day on May 5, 2012 through a reciprocal arrangement that allows other member towns of the South Shore Recycling Cooperative (SSRC) to attend. Another is planned in Kingston for SSRC member towns on May 4, 2013 (http://www.kingstonmass.org/index.asp?SEC=27126BAA-F3EA-45C3-BB1C-F0634D639AC0&DE=3688E62F-2519-4BFB-BDED-37C41302C7D3&Type=B_EV). 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 2012 catchbasin, drainline & water quality structure cleaning with the vactor truck purchased in 2009 and in the 10th permit year cleaned 100 structures, disposed of 356 tons of material and spent \$ 10,680.00 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 was significantly less in the 10th permit term in comparison to the 9th permit term due to a very mild 2011-2012 winter with much less sanding for de-icing roadways. In addition, sand was eliminated in de-icing operations in winter 2012-2013 so the tonnage and cost for disposal may stay low for the 11th permit term. Three of Kingston's trucks were also outfitted with calibrators to improve salting operations in winter 2012-2013. 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 that we meet our good housekeeping goals.

GIS Mapping & Training

During the 10th permit term the Town of Kingston found the OnlineGIS to be invaluable to their work as well as to the public with over 1600 hits during the first 6 months of the online service being launched. In addition, the Town Planner and Conservation Agent received training in GIS during the 10th permit term and continue to lobby for GIS funding to improve efficiencies and better management of town assets/infrastructure including the MS4, among others. The Town Government Study Committee, in its March 2012 report, includes investment in GIS as a recommendation for improving efficiencies in local government.

Collaborating with Neighbors for Water Quality Improvement Projects

In the 10th permit term, the Kingston Conservation Commission wrote a support letter for the Town of Plymouth for a MassBays Research & Planning grant proposal to conduct a cumulative nitrogen loading assessment based on land use data for the Plymouth-Kingston-Duxbury embayment as part of ongoing work to become the 89th estuary in the Massachusetts's Estuaries Project (MEP) to develop a planning model for improved watershed management. The Conservation Commission also supported 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. The Town of Kingston is committed to continuing collaborations with both Duxbury and Plymouth to enhance our shared coastal resource waters.

The Town was fortunate in the 10th permit term to continue work with DEP's DWM BST Program and the JRWA on wet and dry weather sampling for bacteria and nutrients at multiple locations in and around Tussock Brook where elevated bacteria levels have been found. Follow-up sampling will occur in order to track the pollutants to their source which may lead to state- or town-owned stormwater outfalls.

Training of Local Officials

In the 10th permit term, town staff received training in stormwater management through a MassDEP workshop, GIS training through Salem State and the Massachusetts Conservation Mapping Assistance Partnership Program (MACMAPP), Road Salt NPDES training through an EPA webinar, and training on calibration of automatic salt spreaders.

Jones River Watershed Association (JRWA) Ecology & Education Programs

Throughout 2012, JRWA held many educational events that reached nearly 2500 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/> & 2012 Annual Report at <http://jonesriver.org/getfile/reports/2013/JRWAProgressReport2012-Color.pdf> for more information on work with schools). JRWA held its 8th annual herring count in 2012 and involved approximately 60 volunteer counters from the community.

Water Quality Monitoring

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.

Planned Activities 2013-2014

Planned activities for the 2013-2014 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 (604(b) & CPR) while seeking further grant opportunities;
4. Develop stormwater webpage on Town of Kingston website in conjunction with the stormwater by-law and overall NPDES program;
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. Continue advocating for GIS funding for 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, including mailing brochures in summer 2013 tax bills;
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;
13. Continue mailing stormwater brochures and conducting stormdrain stenciling to complete goals under existing General Permit;
14. Communicating with MassDOT to learn how and when they will be remediating impacts from Route 3 and 3A on wetlands and waterways of Kingston. Also, work on getting access to their GIS data for stormwater infrastructure information;
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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
# 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 that result in much public education and outreach with SLRHS, KIS & other schools (stream & habitat restoration & stormwater) (MET, Greenscapes, etc.)	Continue cooperative efforts with JRWA for MET, Greenscapes, DER, WQ sampling projects and other grants in 2013 (MET, Greenscapes, etc.)
Revised				Herring count at Water Dept. (JRWA & public)	Continue JRWA herring count in spring 2013 organized with Water Dept. and community – effort diminished in 2013 by Elm Street bridge reconstruction project
				River & CoastSweep clean-up (JRWA, other partners & public)	Do collaborative clean – ups in 2013 (Coastsweep, etc.)
				Some media coverage of JRWA & Town collaboration	Work to publicize collaborative efforts
# 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 2012	Continue work with Scouts to expand stenciling effort to increase stormwater education efforts. DSTP's to assist on major roads

Revised					
# 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 (MassBay & other sponsors) ConCom regularly uses Greenscapes concepts to educate folks & ask them to Greenscape and use LID – Town installed raingardens at Gray's Beach in 2012 & permitted 2 others (MassBays, JRWA)	Continue support of Greenscapes Program Raingarden retrofits at Delano Beach in 2013 adds to Greenscapes demonstration landscapes on town-owned parcels for educational purposes & conduct a local raingarder tour
Revised				Used town website to post educational stormwater messages ConCom continued mailings to new residents living near wetlands and waterways Held forums on protection of Plymouth-Carver Aquifer in 2011 with cable broadcast & DVD production (PCAAC) Regular articles on river and watershed (JRWA)	Create stormwater webpage to increase public education Mail stormwater brochure in July 2013 tax bills Planning more forums on aquifer protection in 2013 Use newspaper (Kingston Reporter) more 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) & donated another to a new park off of Main Street	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 Put schedule of seminars in tax bills, in paper, on website	Planned hosting of DEP stormwater workshop at town hall for local officials (DEP) Continued advocating stormwater pollution prevention with various town departments and public	Held DEP stormwater workshop for local officials in April 2012 Hold more erosion control workshops for local officials, inspectors & contractors. LID presentation to Kingston garden club in 2013.
Revised				Finalized stormwater by-law	Stormwater by-law approved at ATM 2013, draft SW regulations
# 1.6	Annual clean-up of town properties/streets	Conservation, DSTP	Hold annual clean-up days	Various Boy/Girl Scout groups cleaned up conservation land parcels & DSTP's disposed of rubbish (Boy/Girl Scouts & public)	Work on coordinating more large scale clean-up days on town lands/streets with various town groups (Open Space, ConCom, etc.)

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
# 2.1	Partnership with local schools	Recreation	Gray's Beach Bio-retention Demonstration & Maintenance	Implemented retrofits of & new bio-retention areas to increase infiltration/reduce runoff	Maintain new raingardens
		ConCom, DSTP's	KIS Raingarden Demonstration & Maintenance	ConCom & DSTP's did not maintain raingardens in 2012	Conduct maintenance in 2013 with volunteer effort (volunteers)
		ConCom	Involve SLRHS Cons. & Hort. students in Pine Brook project	SLRHS Cons. & Hort. students will assist with restoration plantings on Pine Brook (JRWA)	Commence Pine Brook restoration planting (JRWA)
		Water Dept.	Greescapes Program participation	<i>Water All Around You</i> program for KIS 5 th graders (MassBays & JRWA)	<i>Water All Around You</i> program for KIS 5 th graders (MassBays & JRWA)
Revised					
# 2.2	Partnership with watershed association	Planning, DSTPs, Harbormaster, Conservation	Continue collection of water quality data	Conducted wet weather sampling around Tussock Brook, received 604(b) grant for Town Center sampling (DEP & JRWA)	Conduct follow-up sampling for Tussock Brook & commence Town Center 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	60 volunteers trained & participating in herring count in 2011 (JRWA)	Continue herring count despite bridge construction & work with Greenscapes in new permit term (JRWA)
Revised					
# 2.3	Storm drain stenciling	Highway, Conservation, KIS, Stormwater Working Group	Organizing neighborhoods/volunteers to stencil storm drains	No stenciling in 2012	Seek other volunteers for stenciling in summer 2013
		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 & occasionally other agencies)	Establish formal Stormwater Management Task Force with expanded involvement to include more town boards and citizens at large (Env. Partners Group, JRWA, advice from other towns)
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 Duxbury held in spring 2012 that was well attended by Kingston residents (SSRC) DSTP's cont'd collecting mercury thermometers, thermostats and handing out non-mercury thermometers	Spring 2013 collection day in Kingston for Duxbury as well (SSRC) Town to continue program – posted on town website
# 2.6	Educational seminars and mailings for residents, local engineers, developers, real estate agents on water quality, stormwater, conservation issues	Stormwater Working Group	Plan contents of workshops and set dates Put schedule of seminars in tax bills, in paper, on website	Worked with DEP in planning Stormwater Workshop for local officials Advocated for stormwater pollution prevention with various town departments & public through public hearings & conservation related mailings to new residents	Hosted DEP Stormwater Workshop in April 2012 at Town Hall for local officials from S.Shore & beyond Hold more workshops for engineers, designers, builders, developers & residents

# 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) River clean-up (JRWA & public)	Work on coordinating more large scale clean-up days on town lands with various town groups (Open Space, Recreation, ConCom, etc.) River clean-up in 2013 & Coastsweep in Fall (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 Some volunteer groups helped clean-up public lands (JRWA, Boy/Girl Scouts, public)	Advertise in newspaper, on website, at cons. land parcels for more volunteers and to start a Volunteer Land Stewardship Group

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
# 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, complete stormwater/IDDE by-law	Submit new NOI and SWMP & draft SW regulations to aid implementation of by-law approved April 2013
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		Env. Partners completed initial drafting of stormwater by-law. Town finalized through joint Planning & Commission meetings and through Stormwater Working Group meetings	Finalized by-law and enforcement provisions approved April 2013 & drafting implementing regulations in 11 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	Received 604b funds for expanding stormwater assessments to another subwatershed of 303d Jones – will include IDDE (DEP, ATP, JRWA) Worked with DEP to sample in Tussock Brook – found hotspot and will follow-up with more sampling (DEP, JRWA)	Based on WQ analysis, prioritize outfalls for remediation & remove any illicit discharges found during sampling 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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
# 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	Finalized stormwater management by-law	Stormwater management by-law adopted April 2013 with enforcement provisions and fine schedule. Draft & approve SW regulations. (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	Stormwater management by-law finalized with enforcement provisions and fine schedule	Stormwater management by-law adopted April 2013 with enforcement provisions and fine schedule. Draft supporting regs. Develop guide on priority areas of town where further pollutant loading may threaten water supply or further degrade 303d's Work with Plymouth, Duxbury, MEP & DEP to develop TMDL for bay
Revised			TMDLs on 303d waters		

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
# 5.1	Regulatory Mechanisms	Selectmen, Town Administrator, Planning, Building, Conservation, DSTP	Establish and implement local stormwater management by-laws	Finalized stormwater management by-law with enforcement provisions and fine schedule	Stormwater management by-law approved at ATM 2013 (Environmental Partners, JRWA)
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	Finalized stormwater management by-law that specifies reviewing authority GIS mapping will improve electronic reviews	Adopted stormwater management by-law April 2013 with jurisdictional review to be finalized 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 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 new DEP stormwater policy) Continue requiring annual reports submitted to ConCom for stormwater maintenance post-construction	Adopted stormwater management by-law April 2013 with jurisdictional enforcement authority to be finalized in regs. 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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
# 6.1	Employee Training	Selectmen, DSTP, Water, Building, Planning, Conservation, Stormwater Working Group	Establish pollution prevention plan and good housekeeping procedures & schedules	Worked with DEP to host a Stormwater Workshop at Kingston Town Hall for municipal officials Continued seeking training opportunities – live & webinar – Road salt webinar and calibration training in year 10	Held Stormwater Workshop in April 2012 and plan to go to UNH Stormwater Center in 2013 with Supt. of Streets, Trees & Parks and Supt. of Water Dept./member(s) of Water Quality Review Committee
Revised					
# 6.2	Improved Maintenance	DSTP, Water, Building	Increase frequency of maintenance and implement better storage practices	Vacuum truck cleaned 100 structures in 2012-2013 & disposed of 356 tons (including street sweepings) Annual street sweeping reduced through elimination of sand from de-icing practices	Work on database to track maintenance activities Research salt reduction strategies WQI & catch basin cleanings will continue to improve function
Revised				Annual cleaning of all town-owned water quality inlets	
# 6.3	Improved stormwater treatment	DSTP, Water, Conservation, Planning	Upgrade current systems in sensitive areas	Received funding to retrofit two town-owned sites at Jones River estuary (ATP) Implemented raingardens for stormwater improvements at Gray's Beach	Improvements to be implemented in 2013 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	Succeeded in 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	DSTP's, BOS, Recycling Committee planning for transfer station redesign to improve recycling DSTP's received more compost bins in early 2012	ATM 2012 approved redesign and will complete in 2013 Continue to encourage composting
#6.6	Stormdrain Stenciling	Stormwater Working Group, DSTP's	Start and finish town-wide stenciling with educational doorhangers & newspaper articles	No stormdrain stenciling in 10 th permit term	Work with community groups to continue stenciling project in 2013 Write more newspaper articles on project, use

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
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	Received 604(b) funding to conduct further WQ sampling (ATP, JRWA) Received CPR funding to implement SW retrofit systems at 2 town-owned sites in estuary (ATP) Worked with DEP DWM to sample Lower Jones and found few hotspots (JRWA)	Conduct sampling and seek grant funds to implement BMP retrofits at prioritized sites (ATP & others) Permit and implement the BMPs at 2 sites (ATP) Conduct follow-up sampling with DEP around hotspots (JRWA)
Revised					
7.2	GIS Mapping	Stormwater Working Group	Complete mapping of stormdrain system and outfalls	Enhanced GIS capabilities achieved in 2011 – continued working to upgrade GIS (Volunteer, CAI, MassGIS MACMAPP) Worked on updating parcel data to Level 3, open space datalayer, text edits, georectification with orthophotos and online mapping website (CAI) Sought funding for GIS position and capital plan	Continuing to fix parcel data discrepancies, GIS platform/capabilities, online mapping website, etc. (CAI & others) Seek funding for staff through MACMAPP grant to Conservation Commission GIS position and capital request not funded at ATM12
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	Received 604(b) funding to continue stormwater modeling in 303d bay & Jones River	Conduct WQ sampling, analyze & prioritize sites for mitigation Seek grant funds in 2013 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 2012-2013:

1. DEP/JRWA/Town of Kingston collaborative wet and dry weather sampling of 15 sites in lower Jones River;
2. Board of Health beach sampling summer swim season 2012; and
3. DMF/Harbormaster 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 – \$ 25,000.00 for NOI, SWMP & By- Law. Remaining budget for education & outreach = \$ 1,672

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	-Many (website) -20 (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 Kingst./Dux)
▪ community participation	(#)	1,731 (in SSRC)
▪ material collected	(tons or gal)	Cardboard – 183 tons (Kingston) Latex Paint – 800 gal.(SSRC) Textiles > 400 tons (SSRC) Books – 224 tons (SSRC)
School curricula implemented	(y/n)	Y (Water All Around You)

Legal/Regulatory

In Place
Prior to Under
Phase II Review Drafted

Regulatory Mechanism Status (indicate with "X")			
▪ Illicit Discharge Detection & Elimination	New 2013	x	
▪ Erosion & Sediment Control		x	
▪ Post-Development Stormwater Management	New 2013	x	
Accompanying Regulation Status (indicate with "X")			
▪ Illicit Discharge Detection & Elimination	New 2013	x	
▪ Erosion & Sediment Control		x	
▪ Post-Development Stormwater Management	New 2013	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 %)	1%
Illicit discharges identified	(#)	2
Illicit connections removed	(#)	2
	(est. gpd)	
% of population on sewer	(%)	26.0%
% of population on septic systems	(%)	74.0%

Construction

Number of construction starts (>1-acre)	(#)	2
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	95%
Site inspections completed	(# or %)	60
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 %)	30
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	(#)	100
Storm drain cleaned	(LF or mi.)	725 LF
Qty. of screenings/debris removed from storm sewer <i>infrastructure (includes street sweepings)</i>	(lbs. or tons)	356 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>)	(\$)	\$ 10,680.00 @ \$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)	356 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Bourne landfill
Cost of sweepings disposal (<i>includes storm sewer screenings</i>)	(\$)	\$ 10,680.00
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