

Municipality/Organization: Town of Concord, MA

EPA NPDES Permit Number: MA041187

MassDEP Transmittal Number: W-035280

Annual Report Number
& Reporting Period: No. 8: March 10-March 11

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2011)

Part I. General Information

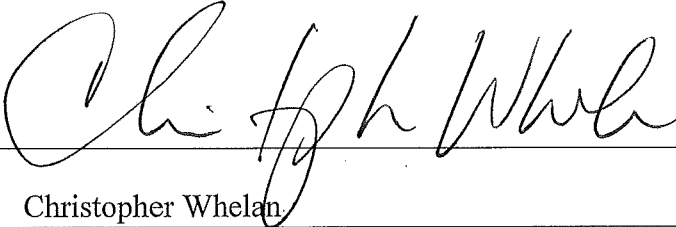
Contact Person: William J. Renault Jr., P.E. Title: Town Engineer

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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: Christopher Whelan

Title: Town Manager

Date: 4/29/11

Part II. Self-Assessment

The Town of Concord, MA has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
1	Stormwater information page on Town of Concord website.	Concord Public Works (CPW)/	Post stormwater information on Town webpages.	<p>Completed</p> <p>Website created in 2009 (Year 6) and linked to the town website. The page can be viewed at: http://www.concordma.gov under the Engineering Division's Page.</p> <p>Prior to 2009, stormwater information was posted on other town web pages as described below.</p>	Continue to maintain and update the web page. As questions or comments arise, make edits to the page based upon frequently asked questions or comments.
		Division of Natural Resources (DNR)	Post stormwater information on Mill Brook Task Force webpage.	<p>CPW Water/Sewer Division page posted including information on water quality and posting of previous water quality reports including stormwater information.</p> <p>Mill Brook Task Force page posted prior to permit including information on stormwater education and basin tagging.</p>	Continue to maintain and update the web page.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
2 Revised	Provide stormwater informational bill inserts.	CPW	Insert stormwater informational into Water/Sewer Division mailings once or more annually	Completed Provided Stormwater information within the Fall 2006 Water Connection mailer (newsletter for Concord Water customers). Stormwater information also included within annual Water Quality Report mailing by CPW's Water & Sewer Division.	Continue to include stormwater information within CPW Water/Sewer Division mailings and annual Water Quality Report.
3	Drop-off/Swap-off recycling days	CPW	Hold twice a year, every year	Completed Drop-off/Swap-off recycling days held May 8, 2010 and October 10, 2010. The May 2010 event included an unwanted pharmaceuticals collection.	Drop-off/Swap-off recycling days currently scheduled for May 7, 2011 and October 15, 2011.
4	Provide stormwater information to businesses	CPW	Provide stormwater flyers to businesses in conjunction with Chamber of Commerce mailings and CPW's annual business recycling event.	Completed Emailed flyers/information and website link to over 400 businesses throughout the Town, via Chamber of Commerce. Also provided informational flyers on stormwater to businesses that participated in Town recycling events.	Continue providing information via yearly email to businesses via COC and/or business recycling events

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
5	Provide informational brochures on recycling, household hazardous materials and medication disposal, composting, and water conservation.	CPW	Maintain at Town House, CPW Administration, and Dept. of Planning and Land management (DPLM)	Completed Always available	Continue to display and make available.
6	Hold "Conservation Coffees", informational and idea exchange sessions regarding maintenance of environmental quality.	DNR	Hold Monthly	Completed Held Monthly	Continue to hold monthly.
7	Provide informational brochures wetlands and waterways.	Natural Resources Commission (NRC)	Maintain at Town House and NRC office.	Completed Always maintained	Continue to maintain and make available.
8	Maintain affiliations with various public conservation groups	NRC	Maintain affiliations	Completed Continued affiliations	Continue affiliations
9	Provide stormwater education to Concord Public Schools	CPW	Conduct an educational session with 8th graders as part of Public Works Day.	Completed CPW conducted a stormwater educational session to 8th graders during Public Works Day on May 20, 2010.	Conduct stormwater educational session to 8th graders during Public Works Day on May 21, 2011.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
		CPW	Conduct annual 4 th Grade educational session at Concord Public Schools on water quality.	Completed CPW Water/Sewer Division conducted a 4 th grade education session December 13-15, 2010 where 9 classes received a presentation which highlighted the hydrologic cycle, water conservation and the need to keep water clean by not dumping to the storm sewer system.	Continue to conduct annual 4 th grade event in December 2011.
10	Provide stormwater information to “Healthy Lawns” workshop	CPW	Provide information to workshop participants	Completed Educational material developed, presented and discussed during 2008 workshop.	If workshop conducted provide information to workshop participants.
11	Post stormwater information including web page address information on popular town bulletin boards and informational centers.	CPW	Post information on bulletin boards and informational brochures on stormwater and Phase II program	Completed Stormwater education located at CPW Administration, DPLM offices and Town House.	Continue to display and make available.

1a. Additions
None.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
12	Provide logistical support to river, etc. clean-up days.	CPW/DNR	Provide support once per year, on average. Hold annual Concord Clean Up event to collect trash within parks, open space and neighborhood areas within Town.	Completed Provide support to Green Team clean-up day Completed The Concord Clean Up event is held annually April 2-10, 2011.	Continue to provide support. Continue to hold annually
13	Tag catch basins throughout Town	NRC	Mill Brook Task Force tags all known catch basins within Mill Brook watershed as they are discovered and/or tags require replacement. (NRC)	Completed Continued monitoring, mapping and tagging of catch basins by the Mill Brook Task Force of the NRC.	Continue to monitor, map and tag catch basins as they are discovered and/or tags require replacement.
		CPW	Revise Town specifications for the standard CB grate to have “NO DUMPING: DRAINS TO WATERWAYS” cast into the perimeter of the grate.	Completed CPW revised the catch basin grate specifications to require the language specified. The new standard catch basin frame and grate was used for all new catch basin installations, catch basin replacements, and frame/grate replacements.	Continue to use the new standard catch basin frame and grate on all new catch basin installations, catch basin replacements, and frame/grate replacements.
		CPW	Tag all catch basins within Town during planned catch basin cleaning activities	In Process Began installation of additional catch basin tags with catch basin cleaning activities. 350 tags installed.	Continue installation of new tags during catch basin cleaning operations Year 9.

2a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
I4 Added	Accept public input for erosion control and stormwater quality issues within Town permitting processes.	NRC/ Dept. of Planning and Land Mgmt. (DPLM)	Accept public input at Town Board/Commission hearings.	Completed Public input accepted at Town Board/Commission hearings.	Continue to accept public input at Town Board/Commission hearings.
		CPW	Provide 10 day public input period for projects <u>NOT</u> requiring approval through Town Board/Commission hearings but meeting review thresholds of the Town of Concord Stormwater Regulations. Projects are posted on CPW website and Town Clerk's office, consistent with new Town of Concord Stormwater Regulations	Completed Created the "Site Plan Review" webpage on CPW website included project post date and comment due date. http://www.concordma.gov/Pages/ConcordMA_Engineering/siteplan	Continue to provide 10 day public input period through CPW website and Town Clerk postings.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
15	Create GIS based drainage map of the entire Town	CPW	Create by year 5, maintain and update as needed.	<p>Completed Inventory of drainage system (DMH, CBs and drain lines) completed within 2002-2003 and developed into a GIS data layer.</p> <p>2004-2006: Drainage system mapping was field verified by Engineering Division and Highway Division staff.</p>	Continue to update GIS inventory as new information becomes available.
Added		CPW	Update drainage layer as required.	<p>Completed Engineering Division staff verifies drainage layer accuracy while surveying and designing the annual roads program and drainage program projects. Drainage system mapping is updated when appropriate.</p> <p>Highway Division staff verify drainage layer accuracy while performing catch basin cleaning within the Fall of 2011 and CB rehabilitations. Drainage system mapping updated when appropriate.</p> <p>GIS Program staff verifies drainage layer accuracy performing GPS data collection when appropriate.</p>	Continue to update GIS inventory from input from Divisions.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
16	Town of Concord Public Storm Drainage Connection Regulations	CPW	Modify policy to regulation based on feedback received from EPA Administrative Order requirements and comments received during Administrative Complaint process. Complete in Year 7; enforce at all times	Completed Drafted new regulations and forwarded to EPA for review and comment in January 2010. No comments received back from EPA regarding previously submitted PSDCR.	Adopt regulations upon receipt of comments from EPA. Enforce at all times.
Revised	Town of Concord Stormwater Regulations	CPW	Incorporate connection regulation language into a comprehensive Town of Concord Stormwater Regulation document using authority of the Private Digging of Roads Bylaw and MGL Chapter 83, Section 10. Complete in Year 8; enforce at all times	Completed Town of Concord Stormwater Regulations adopted by the Public Works Commission March 15, 2011, using authority of the Private Digging of Roads Bylaw and MGL 83 Section 10. Regulations enforced at all times.	Enforce regulations at all times.
17	Develop system to locate priority areas of illicit connections.	CPW	Investigate <u>all</u> catch basins and drain manholes within Town for visual indicators of illicit discharges. In place by end of year 5.	Completed Inventory of entire drainage system completed in association with BMP #14 (between 2002 and 2003) included visual inspection of all drainage structures (CBs and DMHs) within the Town. The inspection identified IDDE indicators including staining, dryflow, foam, odor, etc.	Continue to monitor drainage structures for IDDE indicators consistent with IDDE Protocol.
		CPW	Develop maps of priority areas for additional monitoring based on areas with positive indicators during 2002-2003 drainage system inventory.	Completed Performed follow up inspection for all priority areas including drainage structures and downstream outfalls. Work completed with 2009.	Continue to monitor drainage structures for IDDE indicators consistent with IDDE Protocol.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
		CPW	Based on requirement of EPA Administrative Order, perform visual screenings of all remaining outfalls outside of priority areas outlined above. Complete by end of Year 7.	<p>Completed Visual inspections and logging of all outfalls within completed by the end of Year 7. Outfall Inspection Matrix is included as an attachment within Year 7 Annual Report.</p>	Continue to monitor outfalls for IDDE indicators consistent with IDDE Protocol when appropriate.
		CPW	Based on requirement of EPA Administrative Order, perform dry weather outfall sampling and testing at outfalls based on screening program within Year 7. (17 dry weather samples identified)	<p>Completed All 17 outfalls targeted for dry weather sampling were inspected and samples were collected from the seven outfalls where flow was observed during the sampling event.</p>	Conduct follow up testing, as required, consistent with Town's IDDE protocol to determine potential presence of illicit connections.
			Based on requirement of EPA Administrative Order, perform wet weather outfall sampling of "all outfalls that discharge directly to a water body impaired for pathogens or discharge upstream of a water body impaired for pathogens". (62 wet-weather samples identified)	<p>All 62 outfalls targeted for wet weather sampling were inspected and samples were collected from 57 of the targeted outfalls.</p> <p>Results of outfall testing were forwarded to EPA in November 2010 consistent with the Administrative Order requirements.</p>	Outfalls identified to require follow-up were inspected, sampled and tested within the month of April 2011. Lab results are attached to this Annual Report submittal. All outfall results are below thresholds for surfactants and ammonia/potassium.
				<p>Follow-up testing required for 1 dry weather outfall and 4 wet weather outfalls from list above. On-going mapping efforts also identified 13 additional outfalls to require wet weather testing.</p>	Two remaining outfalls within be tested within upcoming year.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
18	Develop procedure for tracing source of illicit connections.	CPW	Based on requirement of EPA Administrative Order, draft new IDDE Protocol by end of Year 7	Completed CPW drafted and supplied EPA with a document entitled "Town of Concord- IDDE Protocol" in January 2010. Provides a 5 phase standardized protocol for IDDE program.	Continue to utilize IDDE Protocols
19	Develop procedure for removing source of illicit/illegal discharges.	CPW	Based on requirement of EPA Administrative Order, draft new IDDE Protocol by end of Year 7. Protocol includes a 5 phase standardized protocol for IDDE program.	Completed CPW drafted and supplied EPA with a document entitled "Town of Concord- IDDE Protocol" in January 2010. Provides a 5 phase standardized protocol for IDDE program.	Continue to utilize IDDE Protocols and investigate sources of new potential illicit discharges as they become known.
		CPW	System in place by end of year 4.	Completed Town of Concord Public Storm Drain Connection Policy (in place prior to permit), outlines requirements for connections to the Town drainage system and includes sections on enforcement. The PSDCP was used within permit term to regulate and remove both stormwater discharges and non-stormwater discharges to the Town's drainage system.	
		CPW	Modify policy to regulation based on EPA Administrative Order and discussion and comments received during Administrative Complaint process. Complete in Year 7; enforce at all times	Completed Drafted new regulations and forwarded to EPA for review and comment in January 2010.	

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
Revised		CPW	Incorporate removal authority language previously submitted EPA, into a comprehensive Town of Concord Stormwater Regulation document using authority of the Private Digging of Roads Bylaw and MGL Chapter 83, Section 10. Complete in Year 8; enforce at all times	Completed Town of Concord Stormwater Regulations adopted by the Public Works Commission March 15, 2011, using authority of the Private Digging of Roads Bylaw and MGL 83 Section 10. Regulations enforced at all times.	Enforce regulations at all times.
		CPW	Based on requirement of EPA Administrative Order, draft new IDDE Protocol by end of Year 7.	Completed CPW drafted and supplied EPA with a document entitled “Town of Concord- IDDE Protocol” within Year 7. Provides a 5 phase standardized protocol for IDDE program which includes procedures for removing illicit discharges	Continue to utilize protocol and remove sources of new potential illicit discharges as they become known.
20	Develop procedure for evaluating the progress of the programs.	CPW	Based on requirement of EPA Administrative Order, draft new IDDE Protocol by end of Year 7	Completed CPW drafted and supplied EPA with a document entitled “Town of Concord- IDDE Protocol” within Year 7. Provides a 5 phase standardized protocol for IDDE program including procedure for follow up inspections and evaluation of illicit connection removal efforts.	Utilize protocol and perform follow-up testing/inspections when appropriate.
21	Implement BMPs 16-20 (i.e. the IDDE program)	CPW	Implement during Year 7	Completed IDDE program implemented.	Continue to carry out IDDE program.

22	Develop Wastewater Master Plan	CPW/ Water/Sewer	Completed creation by end of Year 1.	Completed CWMP created.	Continue to utilize guidelines within the CWMP.
		CPW/ Water/Sewer	Create Wastewater Planning Task Force to investigate possible amendments to the CWMP	Completed Board of Selectman created Wastewater Planning Task Force to further examine centralized wastewater treatment facility capacity constraints and develop recommendations for Town Meeting 2009 Approval	Continue Wastewater Capacity Study, investigating alternatives analysis to address wastewater capacity constraints and align comprehensive long range plan, planned production housing plan and comprehensive wastewater management plan.

3a. Additions

None

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) -- Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities -- Permit Year 9
23	All projects [in or near wetlands] which are required to file MADEP Stormwater Management Form (Standards #1 - #10)	NRC	100% compliance for all work within wetland resource areas and buffer zones.	Completed Continued to require full compliance.	Continue to require full compliance and implement Wetlands Bylaw and Regulations.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
		NRC	Adopt new non-zoning Wetlands Bylaw and Regulations	<p>Completed New wetland bylaw adopted at 2009 Town meeting. Wetland Bylaw Regulations adopted at 2010 Town Meeting. Bylaw codifies a 25' no disturb zone from wetlands, adds protection for certified vernal pools by creating a 100-foot Buffer Zone from certified vernal pools; and provides the ability for the Town to issue fines for noncompliant offenders.</p>	Continue to require full compliance and implement Wetlands Bylaw and Regulations
24	Soil Erosion and Sediment Control section incorporated into Subdivision Rules and Regulations and Site Plan Review standards.	Dept. of Planning and Land Mgmt. (DPLM) / CPW	Soil Erosion and Sediment Control Standards updated within CPW Design Standards and Construction Specifications. Subdivision Rules and Regulations and Site Plan Review standards reference the design standards.	<p>Completed Prior to permit issuance, CPW Design Standards and Construction Specifications developed. All development and redevelopment work regulated through subdivision review process, site plan review process, and Right of Way and Building permit application processes. All construction work performed in accordance with Concord Public Works Design Standards and Construction Specifications.</p> <p>During Year 7, Soil Erosion and Sediment Control standards updated within Concord Public Works Design Standards and Construction Specifications.</p>	

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
Revised	Town of Concord Stormwater Regulations	CPW	<p>Adopt comprehensive Stormwater Regulations using authority of the Private Digging of Roads Bylaw and MGL Chapter 83, Section 10. Regulations require submittals of erosion control and stormwater management plans for projects disturbing an acre of land or projects requiring technical stormwater peer review through the subdivision review process, site plan review process, and Right of Way and Building permit application processes.</p> <p>Complete in Year 8; enforce at all times</p>	<p>Completed Town of Concord Stormwater Regulations adopted by the Public Works Commission March 15, 2011.</p>	Continue to enforce new Stormwater Regulations
Revised	Public Works Design and Construction Standards and Details	CPW	<p>Revise Public Works Design and Construction Standards and Details to clarify submittal requirements for Erosion Control Plans, Stormwater Management Plans and Long term Operation and Maintenance Plans consistent with new Town of Concord Stormwater Regulations.</p> <p>Standards also provide requirements for design of stormwater BMPs and erosion control BMPs.</p>	<p>Completed Concord Public Works Design and Construction Standards and Details adopted by the Public Works Commission March 15, 2011.</p>	Continue to regulate development and redevelopment projects through subdivision review process, site plan review process and Right of Way permit application process and ensure construction performed in accordance with Public Works Design and Construction Standards and Details and Town of Concord Stormwater Regulations.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
25	Site Plan Reviews by Town Staff	DPLM, DNR, CPW	All site plans reviewed for water quality concerns.	<p>Completed All regulated site plans reviewed for water quality concerns and to ensure conformance with Town of Concord Stormwater Regulations and Public Works Design and Construction Standards and Details.</p>	Continue to review all regulated site plans for water quality concerns and to ensure conformance with Town of Concord Stormwater Regulations and Public Works Design and Construction Standards and Details.
		DPLM, DNR, CPW	Purchase and implement new Town wide permitting software to improve the overall communication between departments/divisions	<p>Ongoing Town staff has continued the review of the new town-wide permit software. Town staff met with vendors to further understand the capabilities and need.</p>	Purchase and implement new Town wide permitting software.
26	Public input on all proposed projects subject to local regulations.	DPLM, NRC	Planning Board, Board of Appeals & NRC allow public comment on regulated projects.	<p>Completed Ongoing at all times.</p>	Continue at all times.
27	Site inspection of construction projects for proper erosion control.	CPW	Construction sites receive periodic visits from Town staff to ensure proper operation of erosion controls.	Inspections of construction sites conducted for compliance with approvals. Inspections ensure construction performed in accordance with Concord Public Works Design and Construction Standards and Details.	Continue to ensure construction is performed in accordance with Concord Public Works Design and Construction Standards and Details.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
Added		CPW	Develop Public Works Design and Construction Standards to include requirements for submittal of monthly reports prepared by a qualified Environmental Monitor.	Completed Public Works Concord Public Works Design and Construction Standards and Details adopted by Public Works Commission on March	Continue to ensure construction is performed in accordance with Concord Public Works Design and Construction Standards and Details.
Added		DPLM	Condition projects meeting erosion control plan review thresholds to require monthly environmental monitor submittals	Completed Project appropriately conditioned	Continue to condition environmental Monitor submittals.
		DNR	DNR inspects all sites with an active Order of Conditions.	Completed Ongoing at all times.	Continue DNR inspections.
28	All work within the public right-of-way (ROW) is inspected to prevent erosion and sediments from washing into the public way.	CPW	Ensure all projects receiving access through the Town's right of way obtain ROW permit. Inspect all construction sites receiving ROW permit application approval. Ensure all construction work is performed in accordance with Concord Public Works Design Standards and Specifications.	Completed Inspections of construction sites conducted for compliance with approvals. Inspections ensured construction performed in accordance with Concord Public Works Design Standards and Construction Specifications.	Continue permitting and inspecting construction sites receiving access through the Town's right of way to ensure construction is performed in accordance with Concord Public Works Design Standards and Construction Specifications.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
29	Stormwater pollution prevention training provided to Town's inspectors of construction sites, and Municipal Operations	CPW	Appropriate employees trained annually on pollution prevention.	Completed Training provided to CPW of the methods concerning pollution prevention and appropriate spill control and protocol.	Continue to implement appropriate protocol and train new employees of the correct methods of stormwater pollution prevention and spill control.

4a. Additions
None

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
30	MADEP Stormwater Standards 2, 3, 4, and 7.	NRC	Concord Public Works Design Standards and Construction Specifications updated to require MADEP Stormwater standards met for all applicable redevelopment projects in Town requiring site plan review, subdivision review, a building permit and/or a ROW Permit.	Completed All regulated projects comply with this standard.	Continue compliance with all regulated projects.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
Revised	Require threshold projects to meet MADEP Stormwater Standards 1-10.	CPW	Develop Concord Stormwater Regulations and Public Works Design and Construction Standards and Details to require all MADEP standards be met for projects regardless of proximity to wetlands.	Completed Concord Stormwater Regulations and Public Works Design and Construction Standards Details adopted by the Public Works Commission March 15, 2011. Projects reviewed to ensure conformance with Concord Stormwater Regulations and Public Works Design and Construction Standards Details and MADEP Stormwater standards.	Continue to ensure plans conform with Concord Stormwater Regulations and Public Works Design and Construction Standards Details and MADEP Stormwater standards.
31	Pre-construction review of regulated developments.	NRC, DP/LM, CPW	Concord Public Works Design Standards and Construction Specifications updated to require MADEP Stormwater standards met for all applicable development and redevelopment projects in Town requiring site plan review, subdivision review, a building permit and/or a ROW Permit.	Completed All regulated projects were reviewed.	Continue to review all regulated projects.
Revised		CPW	Develop Concord Stormwater Regulations and Public Works Design and Construction Standards and Details require preconstruction submittals of erosion control plan, stormwater management plan and long term operation and management plan.	Completed Concord Stormwater Regulations and Public Works Design and Construction Standards Details adopted by the Public Works Commission March 15, 2011. Projects reviewed to ensure conformance with Concord Stormwater Regulations and Public Works Design and Construction Standards Details.	Continue to ensure plans conform with Concord Stormwater Regulations and Public Works Design and Construction Standards Details

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
32	Massachusetts Wetland Protection Act	NRC	100% of projects within wetland jurisdiction areas reviewed.	Completed All regulated projects were reviewed and permitted as necessary.	Continue to review and permit all projects as appropriate.
33	Inspection of regulated subdivisions.	CPW/DNR	100% of regulated subdivisions inspected to ensure proper construction of environmental protections and drainage utilities.	Completed All regulated projects were inspected.	Continue to inspect all regulated projects as appropriate.
Revised		CPW	Develop Public Works Design and Construction Standards to include requirements for submittal of monthly reports prepared by a qualified Environmental Monitor.	Completed Public Works Concord Public Works Design and Construction Standards and Details adopted by Public Works Commission on March 15, 2011.	Continue to ensure construction is performed in accordance with Concord Public Works Design and Construction Standards and Details.
34	Recommended list of BMPs to be used in new construction to be developed and provided to potential developers.	DPLM, CPW	Concord Public Works Design Standards and Construction Specifications updated to include recommended structural stormwater BMPs. All applicable development and redevelopment projects in Town requiring site plan review, subdivision review, a building permit and/or a ROW Permit required to meet standards outlined in CPW Design Standards and Construction Specifications.	Completed EPA poster “Stormwater and the Construction Industry” is posted prominently in the CPW Engineering Office. Poster depicts the proper use and placement of BMPs on construction sites.	Continue to make available to potential developers a list of reference documents for efficient and accepted BMPs. Draft requirements for site specific BMPs if necessary.
Added		CPW	Revise Public Works Design and Construction Standards and Details to provide contractors/developer standard for design of stormwater BMPs and erosion control BMPs.	Completed Public Works Design and Construction Standards and Details updated and adopted by Public Works Commission on March 15, 2011.	Continue to make Public Works Design and Construction Standards and Details available.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
35	Subdivision / Site Plan Rules and Regulations	DPLM, CPW	Evaluate yearly for effectiveness.	Completed Updated Public Works Design and Construction Standards and Details to eliminate inconsistencies between Subdivision/Site Plan Rules and Regulations.	Continue to evaluate rules yearly for effectiveness.

5a. Additions

None

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
36	Cleaning of catch basins	CPW	25% of catch basins cleaned each year.	Completed Cleaned 50% of catch basins during Year 8.	Continue to clean up to 25% of catch basins within Town annually.
37	Annual street sweeping	CPW	100% of Town streets are swept of sand and sediments annually.	Completed 100% of streets swept of sand and sediments.	Continue to sweep all public streets at least once annually.
38	Central Business District (CBD) street sweeping.	CPW	All three CBDs swept weekly, weather permitting, April to November.	Completed Sweeping of all CBDs performed as planned.	Continue with weekly sweeping in CBDs from April to November.
39	Sewer main and manhole cleanings sent to WWTP.	CPW	All cleanings are properly disposed at WWTP.	Completed All cleanings were properly disposed at WWTP.	Continue to properly dispose all sewer main and manhole cleanings at WWTP.
40	Composting facility open to public, accepts used paint.	CPW	Open to public once a week from April to November.	Completed Composting facility opened as planned.	Continue to open and operate composting facility as planned.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
41	Member of Minuteman Regional Household Hazardous Waste Facility.	CPW	Maintain membership at this regional facility.	Completed Membership maintained.	Continue to maintain membership. Concord to host regional Hazardous waste event in June 2010.
42	CPW drainage maintenance within the right-of-way and in NRC wetland jurisdictional areas are controlled by Drainage Maintenance Permit Order of Conditions issued by NRC	NRC, CPW	Meet terms and conditions of the permit.	Completed Met conditions within the general maintenance permit with the NRC for all Town initiated maintenance/construction activities. Permit includes requirements for erosion control during construction activities.	Continue to follow terms and conditions of the permit for all Town initiated maintenance/construction activities.
43	Stormwater Pollution Prevention Plan (SWPPP) and Integrated Contingency Plan (ICP) in place and in effect for CPW facility.	CPW	Maintain SWPPP and ICP, review and update as needed.	Completed Continued to comply with SWPPP, and ICP. Comply with SPCC Plan adopted in November 2008. Updated Spill Prevention Control and Countermeasure (SPCC) plan and contracted professional consulting services to complete a facility wide environmental audit	Continue to comply with SWPPP, ICP, and SPCC Plan. Update as necessary. Implement recommendations developed from environmental audit and manage continued compliance with creation of compliance calendar.
44	CPW operation employees receive stormwater, spill control and prevention, and wetlands training.	CPW	100% of operations employees receive training.	Completed All new employees receive initial orientation training.	All new employees continue to receive initial orientation. Develop and implement ongoing training program for all operations personnel.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
45	Drainage system mapping and GIS system will be used to optimize catch basin cleaning program.	CPW	By year 5, catch basin cleaning program has been optimized.	Completed Crew members accompanied catch basin cleaning crews. Drainage system condition documented and mapping updated when appropriate. Depth of sediment removed at basin collected.	Continue accompanying catch basin cleaning crews to document structure condition, sediment depth removed and update drainage system mapping when appropriate.
46	Use GIS/Drainage system inventory/mapping to identify catch basins in poor condition and then repair and/or retrofit those basins.	CPW	Remove/Retrofit/Repair at least 5 catch basins a year, beginning in year 1.	Completed Crew members accompanied catch basin cleaning crews. Maintenance requirements documented and repaired when appropriate. 75 catch basins removed/retrofitted/repaired.	Continue accompanying catch basin cleaning crews to document basin conditions and schedule repairs when appropriate. Continue to upgrade at least 5 catch basins per year.
47	Increase use of infiltration chambers, LID technologies and stormwater pretreatment for roadway and parking lot redevelopment projects.	CPW	Where soil and site conditions are appropriate, use infiltration chambers/low impact development techniques for stormwater treatment.	Completed See list of projects below.	Continue to identify new and retrofit projects where LID techniques can be employed.

1) Tuttle Trail Accessible Trail Parking Lot – CPW Engineering Division designed a porous pavement 2-car handicapped accessible parking facility for an accessible handicapped trail in the Town Forest. Construction was conducted by CPW Highway Division as an internal project. **Project Completed Fall of 2010.**

2) Route 62 Footprint Reconstruction Project – CPW worked with MassHighway/MassDOT to incorporate an infiltrative BMP retrofit into the 1.2 mi roadway reconstruction project funded through the Transportation Improvement Program. Offline drywell infiltrators were incorporated into the proposed drainage extension being constructed as part of the project. The proposed drainage system will promote infiltration on the project, provide additional groundwater recharge and decrease overall stormwater volume created. **Project Completed Summer 2010.**

- 3) Vanderhoof Parking Lot – Connected a previously installed Vortechnic stormwater treatment chamber to the Town's drainage system as part of the reconstruction of the parking lot. The project increased total suspended solid removal in stormwater discharging to the Mill Brook. **Project Completed 2009.**
- 4) Plainfield Road - CPW designed an infiltrative BMP retrofit into a proposed roadway reconstruction project. Offline drywell infiltrators were incorporated into the proposed drainage extension being constructed as part of the project. The proposed drainage system will promote infiltration on the project, provide additional groundwater recharge and decrease overall stormwater volume created. Project is located within a Zone II. **Project Completed Summer 2010.**
- 5) Willard School LID Retrofit – The Town of Concord implemented low impact development techniques as part of the stormwater controls within the school replacement project. The project included the installation of rain gardens, bioretention areas and infiltrative BMPs to incorporate additional stormwater mitigation for the project. Project is located within a Zone II. **Project Completed 2009.**
- 6) Concord-Carlisle Regional High School – Concord Public Works – Park and tree crews implemented an all-organic turf care treatment regimen for the new turf/junior varsity practice fields installed at the high school. **Project Completed 2010.**
- 7) Prairie Street – Concord Public Works worked with a right-of-way permit applicant to install a bioretention area retrofit to infiltrate the road's stormwater runoff within the grass strip area of the road. The project was designed jointly by the Engineering Division and applicant landscaped architect. An agreement with the applicant and the Town was developed to ensure all maintenance activities are performed by applicant in accordance with MADEP Stormwater Handbook. This is a pilot project for possible future LID retrofits. **Project Completed 2009.**
- 8) Junction Park - CPW Engineering Division completed a design for replacement of the brick paver surface at the park with a porous paver treatment. The design also retrofits a bioretention area and recharges runoff from an adjacent parking facility. The project is paid through a grant administered by the Organization for the Assabet River (OAR) to promote infiltration projects. The project will be constructed within the summer/fall of 2011. **Ongoing Project**
- 9) Pail Factory Pocket Park – CPW Engineering Division conceptually designed and received grant funding for an offline infiltration chamber system to be located under a proposed park located adjacent to the Warner's Pond Dam. The project is planned to be permitted in 2012 for a 2012/2013 construction. **Ongoing Project**

6a. Additions

None

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
48	NRC Order of Conditions, Special Condition #27 prohibits the use of herbicides, pesticides, or fertilizers within resource areas except in a case-by-case basis for invasive species removal.	NRC	In place, will enforce at all times.	Completed Special condition enforced.	Continue to enforce special conditions.
49	Remove direct discharge of Walden Street stormwater to Walden Pond.	CPW (in partnership with Walden Pond State Reservation)	Walden Pond infiltration system installed. Monitor system efficiency.	Completed System efficiency monitored.	Continue monitoring system efficiency.

7a. Additions

50	Make Elm Brook watershed an ongoing priority area for IDDE program	CPW	Screen drainage structures in Elm Brook watershed for signs of illicit discharges.	Completed See Outfall Matrix for structures screened.	Continue to screen drainage structures at least biannually.
		CPW	Conduct wet-weather sampling of outfalls in Elm Brook watershed.	Outfalls in watershed identified and designated on Outfall Matrix.	Sample for fecal coliform, <i>E. coli</i> , and other illicit discharge indicator parameters by November 2010.

7b. WLA Assessment

TMDLs in place in Concord waterbodies are: Assabet River (phosphorus); Elm Brook (Shawsheen River Basin Pathogen TMDL); and Walden and White Ponds (mercury). Of these TMDLs, only the Shawsheen River Basin Pathogen TMDL has a Waste Load Allocation for MS4 stormwater discharges. Although not required, BMPs 48 and 49 will help enhance water quality in the Assabet River and Walden Pond respectively. For Elm Brook, vigilant screening of drainage structures ensure that no illicit discharges are present.

Consistent with the Town's Administrative Order and as outlined within BMP 17, wet-weather sampling has been conducted for outfalls that discharge directly to a water body impaired for pathogens or discharge upstream of a water body impaired for pathogens. Evaluation of these parameters originally identified 62 wet-weather samples and an additional 13 wet-weather samples were identified based on increased mapping efforts.

Sampling and testing have been conducted consistent with the Town's IDDE Protocol, previously submitted to EPA. The initial round of testing completed in October 2010 and follow-up round of testing completed in April 2011 have indicated these critical areas are unlikely to contain illicit connections as testing results were below thresholds for surfactants and ammonia/potassium ratio. Lab results for the April 2011 round of testing are attached to this Annual Report submittal.

Part IV. Summary of Information Collected and Analyzed

Attached are results from follow up outfall sampling and testing as outlined within BMP #17.

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2010 through March 31, 2011)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y
Annual program budget/expenditures **	(\$)	\$205,000 (FY10)
Total program expenditures since beginning of permit coverage	(\$)	\$1,185,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	400 (100%) Businesses 4,900 Residents
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	N/A
Shoreline cleaned since beginning of permit coverage	(mi.)	N/A
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> ▪ days sponsored ** ▪ community participation ** 	(#)	8
	(# or %) (cars/day)	80 cars

<ul style="list-style-type: none"> ▪ material collected ** - Fluorescent bulbs (linear feet of bulbs) - Mercury (lbs.) - Rechargeable and Specialty Batteries (lbs.) - Lead batteries and lead ballast (lbs.) - Latex based paints (non-hazardous) (gals.) - Oil and alkyd based paints, polyurethane, paint thinner and stripper (hazardous) (gals.) 	18,280 48 245 600 840 480
School curricula implemented	(y/n)

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Illicit Discharge Detection & Elimination	X				X
▪ Erosion & Sediment Control	X				X
▪ Post-Development Stormwater Management	X				X
Accompanying Regulation Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination <i>(Town of Concord Stormwater Regulations)</i>	X				X
▪ Erosion & Sediment Control <i>(Town of Concord Stormwater Regulations & Public Works Design and Construction Standards and Details)</i>	X				X
▪ Post-Development Stormwater Management <i>(Town of Concord Stormwater Regulations & Public Works Design and Construction Standards and Details)</i>	X				X

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete (paper, GIS, or both)	(%)	100% of known
Estimated or actual number of outfalls	(#)	398
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	25%
▪ CADD	(%)	10%
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	100%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified **	(#)	2
Illicit discharges identified (Since beginning of permit coverage)	(#)	2 illicit discharges
		8 illegal stormwater connections
Illicit connections removed **	(#); and (est. gpd)	1
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	2 illicit discharges
		8 illegal stormwater connections
% of population on sewer	(%)	35%
% of population on septic systems	(%)	65%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	9
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	Ongoing
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	Every other year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1/yr
Qty of structures cleaned **	(#)	1246
Qty. of storm drain cleaned **	(%, LF or mi.)	2,500 LF (approx)
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	116 Tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Removed and disposed by contractor (Landfill)

Basin Cleaning Costs			
• Annual budget/expenditure (labor & equipment)**	(\$)		\$28,866
• Hourly or per basin contract rate **	(\$ per basin)		\$27.78
• Disposal cost**	(\$)		Included in contract rate
Cleaning Equipment			
• Clam shell truck(s) owned/leased	(#)		2 (Provided by Contractor)
• Vacuum truck(s) owned/leased	(#)		1 (Town)
• Vacuum trucks specified in contracts	(y/n)		N
• % Structures cleaned with clam shells **	(%)		95%
• % Structures cleaned with vacor **	(%)		5%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	2
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	52
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	2,000 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Town Storage
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$50,000
• Hourly or lane mile contract rate **	(\$/hr. or In mi.)	N/A
• Disposal cost**	(\$)	N/A
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	0%

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)	
▪ Fertilizers	(lbs. or %) 0% (Level Use)
▪ Herbicides	(lbs. or %) 0% (Level Use)
▪ Pesticides	(lbs. or %) N/A
Integrated Pest Management (IPM) Practices Implemented	(y/n) Yes

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	32% 1% 0% 0% 0% 0% 66%
Pre-wetting techniques utilized **	(y/n or %)	Approx 10% Arterial/ Collectors Roads Only
Manual control spreaders used **	(y/n or %)	86%
Zero-velocity spreaders used **	(y/n or %)	14%
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	10%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	20%

% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2010	(y/n)	Y

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	N/A (wells)
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	Y
<ul style="list-style-type: none"> Treatment units induce infiltration within 500-feet of a wellhead protection area 	# or y/n	Y *

* Plainfield Road, Willard School and Tuttle Trail projects outlined Section 6 above are located with 500' of a Zone II.