

Municipality/Organization: Town of Concord, MA

EPA NPDES Permit Number: MA041187

MassDEP Transmittal Number: W-035280

**Annual Report Number
& Reporting Period:** No. 14: March 16-March 17

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2017)

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: 4/26/17

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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
1	Stormwater information page on Town of Concord website.	Concord Public Works (CPW)/	Post stormwater information on Town webpages.	<p>Completed 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. Prior to 2009, stormwater information was posted on other town web pages as described below.</p> <p>CPW Water/Sewer Division page posted including information on water quality and posting of previous water quality reports including stormwater information.</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.	Mill Brook Task Force page posted prior to permit including information on stormwater education and basin tagging.	Continue to maintain and update the web page.

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2 Revised	Provide stormwater informational bill inserts.	CPW	Insert stormwater informational into Water/Sewer Division mailings once or more annually.	<p>Completed Provided Stormwater information within the Fall 2006 Water Connection mailer (newsletter for Concord Water customers).</p> <p>Stormwater information also included within annual Water Quality Report mailing by CPW's Water & Sewer Division. <i>"Residential Rain Garden Program"</i> included in April 2015 mailing.</p> <p>Stormwater flyer <i>"Be the Solution to Stormwater Pollution"</i> included within water bills in April 2016</p>	Continue to include stormwater information within CPW Water/Sewer Division mailings.
3 Revised	Drop-off/Swap-off recycling days	CPW	Hold twice a year, every year	<p>Completed Drop-off/Swap-off recycling days held 5/14/16 and 10/15/16. Both events also included an unwanted pharmaceuticals collection.</p>	Drop-off/Swap-off recycling days currently scheduled for 5/6/17 and 10/14/17.

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4 Revised	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 within Year 8. Provided informational flyers on stormwater to businesses that participated in Town business recycling events 4/1/16 and 10/2/16	Continue providing information via yearly email to businesses via COC and/or business recycling events currently planned for 4/7/17 and 9/29/17.
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 on open spaces and waterways.	Natural Resources Commission (NRC)	Maintain at Town House and NRC office.	Completed Always maintained	Continue to maintain and make available.

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8	Maintain affiliations with various public conservation groups	NRC	Maintain affiliations	Completed Continued affiliations	Continue affiliations
9 Revised	Provide stormwater education to Concord Public Schools	CPW	Conduct a stormwater 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 6/2/16.	Conduct stormwater educational session to 8th graders during Public Works Day in 5/24/17.
		CPW	Conduct annual educational session at Concord Public Schools on water quality.	Completed CPW Water and Sewer Division conducted educational sessions on 9/9/16 with the CCHS Rivers and Revolutions Program. 50- 11 th and 12th grade students received a presentation highlighting the hydrologic cycle, water conservation and the need to keep water clean by not dumping to the storm sewer system.	Continue to conduct educational session at Concord Public Schools in Year 15.
		CPW	Participate in Watershed Wise event at Concord Public Schools.	Completed Developed talk entitled “Stormwater Quality and the Homeowner” for presentation at the Watershed Wise Night in Permit Year 9 (4/10/12). Also developed a homeowner focused display for the pre-event meeting and greet where stormwater flyers were also available for handout.	Continue participation in future Watershed Wise night (if held).

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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.

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12 Revised	Develop targeted public outreach to pet owners regarding pet waste disposal based on illegal dumping activities discovered through catch basin cleaning and IDDE monitoring activities (BMPs #17, #19 and #40, #49 & #50)	CPW	Develop informational brochures, dog owners mailing and neighborhood door hangers.	<p>Completed Developed educational brochures which were made available at the CPW offices, Town Clerk's office (the Town's administrator of dog licenses) and included within the presentations at the Watershed Wise night in Permit Year 9 (4/10/12)</p> <p>Developed a targeted informational outreach within the neighborhoods of illegal dumping activities utilizing door hangers. Door hangers hung by CPW staff 3/23/12 and 4/20/12.</p> <p>Provided proper pet waste informational flyer to all new dog license and dog license renewal applicants in Year 14.</p>	Continue to provide proper pet waste information flyer to all new dog licenses and dog license renewal applicants.
		CPW	Evaluate effectiveness of pet waste public outreach initiative with follow up inspections in areas of illegal dumping within 3, 6 and 12 months of discovery, consistent with the Town's IDDE protocol.	<p>Completed Performed 3, 6, and 12 month and 2 year follow up inspections of illegal dumping areas. No new waste bags discovered and the incidents are considered closed.</p>	Continue screening of dumping area with scheduled catch basin cleaning and basin maintenance activities (BMPs # 40, #49 & #50)

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
13 Revised	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 was held 3/23/16 – 4/2/16.	Continue to provide support. Continue to hold annually. Scheduled for 3/25/17 – 4/2/17
14 Revised	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/replacements, catch basin repairs, and frame/grate replacements. 59 new grates were installed in Permit Year 14.	Continue to use the new standard catch basin frame and grate on all new catch basin installations/ replacements, catch basin repairs, and frame/grate replacements.
		CPW	Tag catch basins within Town during planned catch basin cleaning activities	Ongoing Catch basins tagged during catch basin cleaning activities. (1,401 total tags installed throughout Town)	Continue installation of new tags during catch basin cleaning operations.

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15 Revised	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. <i>http://www.concordma.gov/Pages/ConcordMA_Engineering/siteplan</i> One review was conducted in Year 14 for a project meeting the land disturbance threshold, but not included within another Town permitting process.	Continue to provide 10 day public input period through CPW website and Town Clerk postings.
16 Revised	Residential Rain Barrel Program	CPW	Develop program to promote the use of rain barrels and offer barrels at a discounted price to Concord residents.	Completed Program developed to offer of aesthetically pleasing plastic and repurposed wooden whiskey rain barrels to residents. Display barrels are set-up at the CPW offices and high visibility events in Town for promotion. Completed Permit Years 2-13	No planned program for Year 15 due to reduced interest. Evaluate future program startup if interest improves.

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17	Dog Waste Bag Distribution	CPW/Dog Owner Group	Install new dog waste bag dispenser in a high dog use area at Emerson Field and coordinate dog waste pick up with local dog owner group in Year 10 and maintain subsequent years.	Completed CPW stocks dispenser with bags and volunteers from the dog-owner group wheel the toter barrel to the curb each Friday for collection.	Continue to stock bag dispenser and maintain group partnership.
18 Revised	Residential Rain Garden Program	CPW	Work with local watershed group (OARs) and local gardening group (Gardening for Life) to conduct a rain garden talk and tour to promote resident rain garden use throughout town.	Completed The Soak Up the Rain: Rain Gardens Talk and Tour completed on April 2, 2014. Approximately 20 residents attended.	Continue to present at future Garden Talks and Tour.
		CPW	Develop program to promote resident rain garden use throughout Town including a tracking mechanism.	Completed Included information on residential rain gardens within the 2016 Water Quality Report	Continue to develop residential rain garden program . Initiate a new incentive program. Design and install sample at public Works Facility.

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
19	Create GIS based drainage map of the entire Town	CPW	Create by year 5, maintain and update as needed.	Completed Inventory of drainage system (DMH, CBs and drain lines) completed within 2002-2003 and developed into a GIS data layer. 2004-2006: Drainage system mapping was field verified by Engineering Division and Highway Division staff	Continue to update GIS inventory as new information becomes available.
		CPW	Provide updated drainage information to GIS staff for all drainage system modifications.	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.	Continue to update GIS inventory information based on annual drainage and roads program improvements.
		CPW	Provide updated drainage information to GIS staff based on annual catch basin cleaning activities.	Completed Highway Division staff completed field measurements, IDDE inspections and CB tagging while performing catch basin cleaning activities and CB rehabs in Summer 2013 and Spring 2014. Drainage layer updated when appropriate.	Continue to update GIS inventory information based on annual catch basin cleaning activities.
		CPW	Perform drainage layer accuracy improvement project to provide survey-grade position and elevation data	Ongoing CPW GIS Program staff performing sub-cm GPS data collection. Approximately 95% of Town is completed.	Complete drainage layer accuracy improvement project in Year 15.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
20	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.
	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 Ch83 Section 10. Regulations enforced at all times.	Enforce regulations at all times.
21	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 #19 (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.	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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
		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.	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.	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)	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.	Continue to monitor outfalls for IDDE indicators consistent with IDDE Protocol when appropriate.
		CPW	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)	Completed All 62 outfalls targeted for wet weather sampling were inspected and samples were collected from 57 of the targeted outfalls within Year 7 Results of outfall testing were forwarded to EPA in November 2010 consistent with the Administrative Order requirements.	Continue to monitor outfalls for IDDE indicators consistent with IDDE Protocol when appropriate.
		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 and investigate sources of new potential illicit discharges as they become known.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
		CPW	Follow-up testing required for 1 dry weather outfall and 4 wet weather outfalls from lists above. On-going mapping efforts also identified 13 additional outfalls to require wet weather testing. Complete by end of Year 9	Completed All remaining inspection and testing completed consistent with the Town's IDDE protocol within Year 9. Sampling and testing results included within Year 9 annual report.	Continue to monitor outfalls for IDDE indicators consistent with IDDE protocol when appropriate.
		CPW	Perform IDDE screening during annual catch basin cleaning activities.	Completed Highway Division crews utilize a mobile GIS application during catch basin cleaning activities, perform inspection/screening activities and highlight areas for follow up by Engineering Division staff.	Continue to perform screening and inspection activities during the catch basin cleaning activities and utilize IDDE Protocols to investigate sources of new potential illicit discharges as they become known.
22	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. 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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
23	Develop procedure for removing source of illicit/illegal discharges.	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.	
		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.

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		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.
24	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.
25	Implement BMPs 19-24 (i.e. the IDDE program)	CPW	Implement during Year 7	Completed IDDE program implemented.	Continue to carry out IDDE program.
26	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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
27	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.
		NRC	Adopt new non-zoning Wetlands Bylaw and Regulations	Completed New wetland bylaw adopted at 2009 Town meeting. Wetland Bylaw Regulations adopted at 2010 Town Meeting and scheduled for minor revisions at 2013 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.	Continue to require full compliance and implement Wetlands Bylaw and Regulations

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28 Revised	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 CPW DS&CS.	<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. Erosion Control Plan (ECP) and SWPPP required for all projects meeting threshold</p>	Continue to require Erosion Control Plan (ECP) and SWPPP required for all projects meeting threshold.

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	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
	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> <p>Erosion Control Construction Standards and Details updated in Year 14.</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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
29 Revised	Site Plan Reviews by Town Staff	DPLM, DNR, CPW	All site plans reviewed for water quality concerns.	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.	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	Ongoing Town staff evaluating the options for permitting software.	Continue the evaluation of Town wide permitting software.
		DPLM, CPW	Develop NPDES tracking matrix for all projects meeting erosion control plan disturbance thresholds including links to electronic erosion control plan, SWPPP and inspection report submittals	Completed Utilized tracking matrix for 13 projects meeting erosion control plan disturbance thresholds. Tacking matrix included as attachment to this annual report.	Continue to utilize matrix for projects meeting erosion control plan disturbance threshold.
30	Public input on all proposed projects subject to local regulations.	DPLM, NRC	Planning Board, Board of Appeals & NRC allow public comment on regulated projects.	Completed Ongoing at all times.	Continue at all times.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
31 Revised	Site inspection of construction projects for proper erosion control.	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.
		DPLM,CPW	Condition projects meeting erosion control plan review thresholds to require monthly environmental monitor submittals	Completed Projects appropriately conditioned and submittals provided as required. (Monthly erosion control reports provided for 13 on-going projects in Year 14)	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.
		CPW	Construction sites also receive periodic visits from Town staff to ensure proper operation of erosion controls.	Completed 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.
		DPLM,CPW	Develop NPDES tracking matrix to include construction phase environmental monitor submittals for all projects meeting the erosion control plan disturbance thresholds.	Completed All projects meeting the erosion control plan disturbance thresholds are inputted into the matrix which includes server links submittals of the construction phase environmental monitor reports. Matrix included as attachment to this Year 14 update.	Continue to utilize matrix for projects meeting erosion control plan disturbance threshold.

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32	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 Construction 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.
33	Stormwater pollution prevention training provided to Town's inspectors of construction sites, and Municipal Operations		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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
34	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 development and redevelopment projects in Town requiring site plan review, subdivision review, a building permit and/or a ROW Permit.	Completed All regulated projects required to comply with this standard.	Continue compliance with all regulated projects.
	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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
35 Revised	Pre-construction review of regulated developments.	NRC, DPLM, 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. 4 new projects were reviewed in Permit Year 14.	Continue to review all regulated projects.
		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
36	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.
37	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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
		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.
38	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.
		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 and revise as appropriate.
39	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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
40 Revised	Cleaning of catch basins	CPW	25% of catch basins cleaned each year.	Completed Cleaned 39% of catch basins during Year 14.	Continue to clean at least 25% of catch basins within Town annually.
41	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.
42	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.
43	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.
44 Revised	Composting facility open to public, accepts used paint.	CPW	Open to public twice a week from April to November.	Completed Composting facility opened as planned.	Continue to open and operate composting facility as planned.
45 Revised	Hazardous household waste collection	CPW	Hold Household Hazardous Waste Events	Completed Maintained membership with in Minuteman Household Hazardous Waste Facility and participated in 8 events in 2016: - 4/16, 5/14, 6/18, 7/16, 8/13, 9/18, 10/15, 11/12. CPW will hosted a Hazardous Waste Day 9/21.	Continue participation in monthly Minuteman network household hazardous waste events (8 Events planned for 2017 - 4/16, 5/14, 6/18, 7/16, 8/13, 9/18, 10/15, 11/12. CPW will host a Hazardous Waste Day 9/21.
		CPW	Provide year round collection at CPW offices for “universal” collection items (florescent bulbs, mercury, etc.).	Completed Material collected throughout permit Year 14.	Continue to collect hazardous material.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
46	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.
47	Stormwater Pollution Prevention Plan (SWPPP), Spill Prevention Control and Countermeasure (SPCC) Plan and Integrated Contingency Plan (ICP) in place and in effect for CPW facility.	CPW	Maintain SWPPP, SPCC and ICP Plan for CPW facility. Review and update as needed.	Completed Complied with SWPPP, SPCC and ICP Plans for CPW Facility.	Continue to comply with SWPPP, SPCC and ICP Plans. Update as necessary.
48 Revised	CPW operation employees receive stormwater, spill control and counter measure training	CPW	100% of operations employees receive annually SPCC training	Completed Conducted two SPCC training sessions 6/24 & 7/8. All operations employees received training.	Continue annual SPCC training.
49	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 Highway Division crews completed measurements for infrastructure documentation, structure condition and depth of sediments removed within the catch basin cleaning operations. GIS Drainage layer updated when appropriate.	Highway Division cleaning crews will continue to document structure condition, sediment depth removed and drainage system map updates when appropriate.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
50 Revised	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 Highway Division crews utilized documented structure condition to remove/retrofit/replace/repair 59 catch basins. 28 drainage structures and 1,939' of drainage pipe included in roadway and drainage bid projects based on drainage condition inventory.	Continue Highway Division crew structure condition documentation and perform maintenance when appropriate. Upgrade minimum of 5 catch basins per year.
51 Revised	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.

Low Impact Development Demonstration Projects:

- 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.
- 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 design and bidding for replacement of the brick paver surface at the park with a porous paver treatment. The infiltration design also retrofits a bioretention area into the park area to collect and treat runoff from an adjacent parking facility. Construction began within the fall of 2012. **Project completed Spring 2013.**
- 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 still in the planning phase.
- 10) Concord Carlisle Regional High School – Low impact development techniques were included 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.**
- 11) 2012/2013 Roads Program - CPW Engineering Division designed a bioretention area retrofit design into the Pond Street roadway reconstruction, included within the 2012/2013 Roads Program bid. Construction began within the fall of 2012. **Project completed Spring 2013.**
- 12) 2013/2014 Roads Program - CPW Engineering Division incorporated bioretention area retrofit designs into the roadway reconstructions of Crescent Street, Baker Avenue and Wilson Street and will be bid for construction within the 2013/2014 Roads Program contract. These designs will regrade the roadways to promote infiltrate stormwater in newly constructed bioretention areas constructed existing cul-de-sacs

and intersection islands. Additionally the project will incorporate infiltration measures in Crescent Street with the installation of a drywell and perforated drain overflow main. **Project completed Fall 2014**

- 13) Thoreau Street Sustainable Infrastructure Retrofit - CPW Engineering Division completed the design and construction of a sustainable infrastructure demonstration project which included a tree box filter and porous paver retrofit to collect stormwater from the Thoreau Street right of way near the Concord Depot. **Project completed Fall 2015**
- 14) 2015/2016 Roads Program – Phase I - CPW Engineering Division incorporated bioretention area retrofit design into the roadway reconstruction and intersection realignment of Deacon Haynes Road. The project was included within the 2015/16 Roads Program bid. **Project to be completed 2016.**
- 15) Commonwealth Avenue/Church Street Streetscape Enhancements – CPW Engineering Division completed the design for significant sustainable infrastructure retro-fits for the proposed streetscape and park improvement project. The project will install new bioretention, tree box filters, and porous pavers. **Project to be completed by Summer 2017**
- 16) Parking Lot Program - CPW Engineering Division incorporated sustainable infrastructure retrofits into the parking lot rehabilitation designs for Walden Street and Keyes Road. The project will install a new bioretention area in Keyes Road and install two small rain garden areas and two tree box filters into the Walden Street parking lot. The project will be bid in May 2017. **Project to be completed by Summer 2017.**
- 17) Cambridge Turnpike Improvement Project - CPW and consultant CMA Engineers are evaluating the opportunities for the incorporation of LID retrofits into the Cambridge Turnpike Improvement Project. Water Quality/infiltration opportunities currently identified in the preliminary design include bioretention areas at the intersection of Sandy Pond Road and the intersection as well as miscellaneous tree box filters on the 1.3 mile stretch of roadway. **Project to be designed by Fall 2017**

6a. Additions

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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15.
52	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.
53	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.
54	Make Elm Brook watershed an ongoing priority area for IDDE program	CPW	Screen drainage structures and outfalls in Elm Brook watershed for signs of illicit discharges.	Completed All Elm Brook outfalls were screened, sampled and tested within BMP 19. Drainage structure screenings were also conducted within BMP 16 for the drainage layer accuracy improvement project.	Continue to screen drainage structures at least biannually with catch basin cleaning activities.
		CPW	Conduct wet-weather sampling of outfalls in Elm Brook watershed.	Completed Outfalls in watershed identified and designated on Outfall Matrix.	

7a. Additions

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 53 and 54 will help enhance water quality in the Assabet River and Walden Pond respectively. For Elm Brook, vigilant screening of drainage structures will ensure that no illicit discharges are present.

Wet-weather sampling has been conducted with no presence of pathogens detected. If discovered, the Town will further investigate any source is from an illicit connection or discharge consistent with the Town's IDDE protocol and remove the connection/discharge.

Part IV. Summary of Information Collected and Analyzed

Not applicable for Permit Year 11.

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, 2014 through March 31, 2015)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Y
Annual Drainage Capital Program budget/expenditures **	(\$)	\$215,000 (FY17)
Supplemental Funding (CH90/Roads Borrowing) **	(\$)	\$250,000 (FY17)
Maintenance Budget (Budget, T&M Internal Projects)	(\$)	\$200,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund, Grants, State Aid, Roads Borrowing

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 / Drop Off Swap Off Day		
Days Sponsored ** <ul style="list-style-type: none"> Minuteman Hazardous Products Facility Collection Days (in Lexington) Drop Off Swap Off Days Business Recycling Days 	(#)	8 2 2
Community Participation ** <ul style="list-style-type: none"> Minuteman Hazardous Products Facility Collection Days (in Lexington) Drop Off Swap Off Days Business Recycling Days 	(# or %)	69 residents 1,667 cars 38 businesses
Material collected ** <ul style="list-style-type: none"> Fluorescent bulbs (linear feet of bulbs) Mercury (lbs.) Nickel Cadmium, Lithium and Lead Acid batteries (lbs.) Oil and alkyd based paints, polyurethane, paint thinner and stripper (gals.) Unwanted Medications/Sharps (gals.) Electronics Collection (lbs.) 		14,532 13 293 500 270 44,185
School curricula implemented	(y/n)	Y

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with “X”)					
Illicit Discharge Detection & Elimination	X				X
<ul style="list-style-type: none"> Erosion & Sediment Control 	X				X
<ul style="list-style-type: none"> Post-Development Stormwater Management 	X				X
Accompanying Regulation Status (indicate with “X”)					

<ul style="list-style-type: none"> Illicit Discharge Detection & Elimination (Town of Concord Stormwater Regulations) 	X				X
<ul style="list-style-type: none"> Erosion & Sediment Control (Town of Concord Stormwater Regulations & Public Works Design and Construction Standards and Details) 	X				X
<ul style="list-style-type: none"> Post-Development Stormwater Management (Town of Concord Stormwater Regulations & Public Works Design and Construction Standards and Details) 	X				X

Mapping and Illicit Discharges

	Units	Response
Outfall mapping complete (paper, GIS, or both)	(%)	100% of known
Estimated or actual number of outfalls	(#)	440
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
<ul style="list-style-type: none"> Paper/Mylar 	(%)	60%
<ul style="list-style-type: none"> CADD – Sub-cm Survey grade accuracy 	(%)	95%
<ul style="list-style-type: none"> GIS 	(%)	100%
Outfalls inspected/screened	(# or %)	100%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	4 (Illegal dumping)
Illicit connections removed	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	35%
% of population on septic systems	(%)	65%

Construction

	Units	Response
Number of construction starts (>1-acre) **	(#)	4
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	100%
Tickets/Stop work orders issued **	(# or %)	1
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	1

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections (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

	Units	Response
Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(%/yr)	25%
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(%/yr)	25%
Qty of structures cleaned **	(#)	1,112
Qty. of storm drain cleaned **	(%, LF or mi.)	1,000 LF (approx)
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	159 Tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$60,000 (approx)
• Hourly or per basin contract rate **	(\$ per ton)	N/A
• Disposal cost**	(\$)	\$6,816 (approx)
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1 (Town owned)

• Vacuum truck(s) owned/leased	(#)	1 (Town owned)
• Vacuum trucks specified in contracts	(y/n)	N
• % Structures cleaned with clam shells **	(%)	95%
• % Structures cleaned with vactor **	(%)	5%
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)	32 Downtown
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	439 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$55,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	N/A
• Disposal cost**	(\$)	\$15,146
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)	Y

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	99% 1% 0% 0% 0% 0% 0%
Pre-wetting techniques utilized **	(y/n or %)	Approx 15% Arterial/ Collector Roads Only
Manual control spreaders used **	(y/n or #)	1
Zero-velocity spreaders used **	(y/n or #)	0
Open loop ground-speed controlled spreader used **	(y/n or #)	2
Closed loop ground-speed controlled spreader used **	(y/n or #)	6
Estimated net reduction or increase in typical year salt/chemical application rate	(%)	0%
Estimated net reduction or increase in typical year sand application rate **	(%)	100% reduction
% 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
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	Y *

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



Concord Public Works
Engineering Division

NPDES - MS4
Construction Stormwater Management Tracking Matrix

Project Address	Project Name	Engineer	Project Owner	Contractor	Permits	O&M Plan	Erosion Control Plan	SWPPP	Inspection Reports/ Observation Reports	Complete
Commeford Road	Black Horse Place	CAO	Meninno Construction	Meninno Construction	Site Plan	Operations & Maintenance plan 1-29-2016	Erosion control plan 1-29-2016	SWPPP 2-4-2016	Inspection Reports 4-22-2017	No
Forest Ridge Road	Black Birch Lane	CAO	John C. McBride	Jerry Evans	Site Plan	Operations & Maintenance 8-12-15	Erosion Control 8-7-15.pdf	SWPPP 8-21-15	Inspection Reports 4-4-2017	No
214Y Main Street	Solar Project	CAO	Kearsarge Concord, LLC	Kearsarge Concord, LLC	ZBA & Site Plan	Operations and Maintenance 7-2016	Erosion Control Plan 6-1-2016	SWPPP June 2016		No
214Y Main Street	School Bus Transportation Depot	WR	Concord Public Schools	J & J Contractors, Inc	Building Permit	LTO&M Plan being developed	Erosion Control 4-19-2016	SWPPP 8-29-2016	Inspection Reports 4-12-17	No
Monsen Road 9B	9B Monsen Rd-Subdivision	CAO	Bentley Building Corp.	Bentley Building Corp.	Definitive Subdivision /NOI	Operation & Maintenance Plan 2-22-13	Erosin Control Plan 2-22-13	SWPPP 10-16-13	Inspection Reports 11-29-16	No
Keyes Road/Lowell Road	Millbrook Tarry	WR	Caisson Construction	Jim White	Site Plan		Erosion Control 3-17-17	SWPPP 2-27-2017	Construction Start May 2017	No
Lexington Road	Concord Museum Rehabilitation	WR	Concord Museum	TBD	ZBA, Site Plan & NOI			SWPPP 3-27-17	Construction Start May 2017	No
Laws Brook Road	Rideout Park Rehab	WR	Town Of Concord	TBD	ROW Permit				Construction Start Summer 2017	No
Winthrop Street	Christopher Heights (Junction Village)	WR	Grantham Group LLC	TBD	ZBA, Site Plan & NOI	Operations and Maintenance 3-31-17			Construction Start Summer 2017	No
Cambridge Turnpike 396	396 Cambridge Turnpike	JZ	Bentley Building Corp.	Bentley Building Corp	ZBA, Site Plan	Operations and Maintenance 8-27-15	Erosion and Sedimentation Control Plan 8-27-2015	SWPPP 8-27-2015	Inspection Reports 4-26-16	Yes
Baker Avenue Extension	Concord Meadows Corporate Center- Hotel Development	CAO	Normandy Concord Acquisition, LLC	Pro Con	ZBA, Site Plan & NOI	Operations & Maintenance July 2016	Erosion Control 4-8-2015	320 Baker Ave Hotel SWPPP March 2015	Inspection Reports 8-14-2016	Yes
Baker Ave 300-330	Concord Meadows Corporate Center	IMC	Normandy Concord Acquisition, LLC	Erland	ZBA, Site Plan & NOI	Operations and Maintenance Plan 1-23-2011	EROSIN CONTROL 9-29-11	SWPPP 1-23-11	Inspection Reports 10-20-2012	Yes
Beharrell Street 50/13B Commonwealth Ave	Brookside Square	CAO	The Boynton Co., Inc.	Tocci	ZBA, Site Plan & NOI	Operations and Maintenance Plan 12-12-2013	Erosion Control Plan 12-10-13	SWPPP 12-17-13	Inspection Reports 10-28-2015	Yes
Barnes Hill Road 150	Barnes Hill Road 150	IMC	Columbia Design Group	Barnes Hill Rd. LLC	ZBA, Site Plan	Operation and Maintenance Plan.pdf	2013-10-15 Erosion control plan 10-15-2013	SWPPP 8-30-13	Inspection Reports 5-29-2015	Yes
Elm Street 1257	The Homes on Elm	AC	John C. McBride	Jerry Evans	Site Plan, NOI	Operations and Maintenance Nov. 2012	Erosion and Sedimentation Control Plan Nov 2012	SWPP 6-17-2013	Inspection reports 4-20-15	Yes
Fairhaven Rd 153,16A,15A	Concord Academy Athletic Campus	CAO	Concord Academy	Multiple	Site Plan	Operations and Maintenance Plan 12-13-11	Erosion Control Plan 9-16-11	SWPPP 1-10-12	Inspection reports 9-28-12	Yes
Lowell Road	Mary Mae Village	AC	Middlesex School	FE French Construction	Site Plan	Operations and Maintenance plan 7-13-2012	Erosin Control Plan 6-27-2012	SWPPP 12-10-12	Inspection Reports 8-5-13	Yes
Lowell Road	Middlesex School Barn Renovation	WR	Middlesex School	FE French Construction	Site Plans, Mx Facilities,	Operation & Maintenance Plan 7-11-14	Erosion Control Plan 7-11-2014	SWPPP 7-11-2014	Inspection Reports 8-26-2014	Yes
Lowell Road	Middlesex School Music and Campus Center	CAO	Middlesex School	Brian Kennedy	Site Plan	Operations & Maintenance Plan	Erosion Control 7-1-2015	SWPPP 7-1-2015	Inspection Reports 8-31-15	Yes
Lowell Road	Landry Hall	CAO	Middlesex School	M J Cataldo, Inc	Site Plan	Operations & Maintenance Plan	Erosion Control 6-5-2015	SWPPP 7-31-2015	Inspection Reports 1-22-2016	Yes
Main Street	1888 Main Street	CAO	Matthew Sepe	EMS Development	Definitive Subdivision /NOI	Operations and Maintenance Plan 12-2-2014	Erosion Control Plan 3-24-15	SWPPP-4-9-2013	Inspection Reports 5-13-2016	Yes
Old Bedford Road 155	Heritage Pool and Racquet Club	CAO	Heritage P & R Club	Brookstone Builders	ZBA, Site Plan & Special Permit		Erosion Control 8-31-12	SWPPP 8-30-12	Inspection Reports 5-16-2013	Yes
Old Bedford Road 506	Granite Post Estates	CAO	Wayne J Busa-H.K.Development	Applewood Construction	ZBA, Site Plan & Special Permit, NOI	Operations and Maintenance Plan 6-1-11	Erosion Control Plan 7-29-09	SWPPP 6-1-11	Observation Reports 11-26-2013	Yes

Old Powder Mill Road 48	Concord Muse/Alexan	CAO	Mill Creek Residential Trust	West Concord Development	ZBA, Site Plan	Operations and Maintenance 12-9-10	Erosion Control 10-29-10	SWPPP October 2010	Inspection Reports 1-27-12	Yes
246 ORNAC	Concord Country Club	CAO	Concord Country Club	Onyx Corporation	Site Plan	Operations & Maintenance Plan August 24 2015	Erosion Control Plan 9-24-15	SWPPP Dec 1 2015	Inspection Reports 5-20-2016	Yes
Sudbury Road 211	Crosby Market Paving	IMC	Crosby	Asphalt Services Inc	Site Plan	Operation and Maintenance Plan 3-22-12				Yes
Walden Street 500	CCHS-New High School	CAO	CCRSD	Turner	ZBA, Site Plan, & NOI	Operations and Maintenance REV 2-11-13	Erosion Control Plans REV 7-18-14	Executed SWPPP Jan 2013	Inspection Reports 10-5-2015	Yes
Walden Street 500	CCHS-Playing Field	CAO	Gale Associates	R.A.D	ZBA, Site Plan, & NOI	Operations and Maintenance Plan Feb. 2014	Erosion Control 7-14-14	SWPPP 7-29-14	Monitoring Report 9-30-15	Yes
Walden Street 755	CMLP Solar Landfill Project	CAO	Kearsarge Concord, LLC	IESI	ZBA, Site Plan & NOI	Town of Concord Landfill O & M Plan	Erosion Control Plan 9-25-13	SWPPP May 2013	Inspection Reports 6-2-2014	Yes