

MAY 03 2017

Municipality/Organization: Hudson, MA

EPA NPDES Permit Number: MA 041198/MaDEP

MaDEP Transmittal Number: W-036113

Annual Report Number & Reporting Period: Year 14
April 1, 2016 - March 31, 2017

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

Part I. General Information

Contact Person: Max Kamel Title: Assistant DPW Director

Telephone #: (978) 562-9333 Email: Mkamel@TownofHudson.org

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: Thomas Moses

Title: Executive Assistant

Date: April 28, 2017

Part II. Self-Assessment

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

Note: Our BMP numbers assigned to the various tasks are identified as follows:

BMP 4-1 (Task – control measure) – This would be Task #4 for control measure #1 Public Education and Outreach

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-1	Storm Water Flyer to Community Residents	DPW and SuAsCo	Flyer distributed to 75% of residents and compile survey results	N/A	N/A
Revised					
2-1	Storm Water Lesson Plan for 5 th Grade Students	Hudson School Dept and SuAsCo	Develop & distribute lesson plan to 5 th grade teachers	N/A	N/A
Revised					
3-1	Storm Water Flyer to Community Businesses	DPW and SuAsCo	Flyer distributed to 50% of businesses & have stormwater logos displayed at business	N/A	N/A
Revised					
4-1	Storm Water Media Campaign	DPW and SuAsCo	Media info display packet delivered to local media and generate 4 press releases for major media outlets	Displayed at Town Hall for different occasions such as Annual Town Meeting, election day, River Fest day, and others to educate residents about stormwater.	Develop new media and continue display at Town Hall for different occasions such as Annual Town Meeting, election day, River Fest day, and others to educate residents about stormwater.
Revised					
5-1	Storm Water Video	DPW and SuAsCo	Show storm water video @ 1 public meeting and on local cable stations	Educated Hudson DPW Employees about Stormwater Pollution Prevention for MS4.	Continue the DPW Personnel education in addition to implementing a program to educate DPW new employees of the storm drain and storm drain pollution prevention and to train them on how to detect, investigate and prevent stormwater pollution. Continue working with SuAsCo in 2017 to obtain media material to be aired on cable channel(s).
Revised					

Revised					
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1a. Additions

6-1	Develop Storm Water Web Site	DPW and IT Dept.	Develop a storm water page on the Town web site by spring of 06	Added Stormwater information such as street sweeping, storm drain issues and others to the Town website.	Continue working on the DPW section of the Town website to update the storm water information and links.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-2 Revised	Storm Water Traveling Display	DPW and SuAsCo	Circulate display for 3 months in permit year #1	Displayed information at Town hall, Town Meeting and other public activities such as RiverFest.	Continue to display at Town Meeting and other public activities such as RiverFest.
2-2 Revised	Storm Water Poster Contest for 5 th Graders	SuAsCo & Hudson School Dept	Contest is held and entries are received, judged, & displayed	N/A	N/A
3-2 Revised	Storm Water Photo Contest for High School Students	SuAsCo & Hudson School Dept.	Contest is held and entries are received, judged, & displayed	N/A	N/A
4-2 Revised	Storm Water Summit Special Event	DPW & SuAsCo	Hold local or multi-community summit & encourage community to attend	N/A	N/A
5-2 Revised	Storm Water Super Summit and Conduct an Evaluation & Assessment of Public Stormwater Awareness	DPW & SuAsCo	Municipal participation in Summit, self-test distributed to 75% of residents, compile test results	Task was accomplished in 2006, one year ahead of schedule	N/A
6-2 Revised	Storm Water Catch Basin markers	DPW & Hudson High School	Work with Hudson High School science teacher to affix catch basin markers	N/A	Task will continue as soon as we receive markers from SuAsCo. Markers will be passed to Hudson High School for affixation by students under teachers' supervision. Also, Hudson DPW Employees will affix the markers on all new catch basins.

2a. Additions

7-2	Town and River Clean-up	DPW & Volunteers	Clean river, roads and parks	Task is performed at least once a year. Volunteers worked along with the Hudson DPW Employees and Board of Health to clean the Assabet river banks, and around the brooks and resource areas. Town DPW cleaned the Assabet River, different brooks and streams in multiple locations throughout the year.	Continue the clean-up efforts to remove all debris, trash and others around resource areas. Stay proactive in cleaning river, brooks and streams as needed.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-3 Revised	Identify & map outfalls and receiving waters	DPW	Map all outfalls and incorporate into GIS	Used traditional measurement methods and high accuracy GPS to locate drainage structures to the nearest foot. Continue to refine the outfall list to include outfalls that directly connected to United States Water. Continued to update the map of the drainage system. Locate any missing features and add them to GIS.	Utilize the high accuracy GPS to locate drainage structures to the nearest foot. Continue to refine the outfall list to include outfalls that directly connect to United States Water. Continue to update the map of the drainage system. Locate any missing features and add them to GIS.
2-3 Revised	Database of existing structures	DPW	Locate all structures and develop rating & maintenance plan	Updated catch basin and manhole databases on all structures and outfalls.	Continue update the catch basins database to include a field (column) for sump information. Populate sump (if exist) with depth and condition after annual catch basin cleaning.
3-3 Revised	Develop and implement a Storm water ordinance	DPW & Town Boards	Have an ordinance adopted within 12 months	Enforced the adopted (added) “Regulations Governing Illicit Connections and Discharge to the Municipal Storm Drain System” to the Board of Health Rules and Regulations. The Town also adopted “Floor Drain Regulations”.	Continue the enforcement of the implemented regulations
4-3 Revised	Inform Public, employees, businesses of illicit discharges	DPW	To inform who, what, where, and how to detect an illicit discharge	Informed personnel handling storm drain work to contact DPW office for any illicit, pollution, or any suspicious activity. DPW worked with the Board of Health and Conservation Commission to immediately take actions and/or resolve the problem.	Establish training sessions for Hudson DPW employees to train them to detect, investigate and prevent stormwater pollution. Continue coordination with different Commissions and Boards in order to maintain safe and healthy community.

5-3	Develop & implement an illicit discharge plan	DPW	Review existing mechanisms and determine how to regulate illicit discharges and develop a bylaw	DPW used a pipe TV Camera to inspect and trace many storm drain pipe. Worked with many instances during the year with Building Department, Fire Dept, Board of Health, and Conservation Comm. to investigate suspicions of illicit discharge.	Continue working with the Fire Dept, Board of Health and Conservation Commission and other town offices to investigate and resolve illicit discharge problems. Continue working toward the implementation of the written plan.
Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-4	Sediment & Erosion Control Ordinance	DPW & All Boards	Have an ordinance for erosion control within 12 months	Enforced the “Rules and Regulations Governing Construction, Post Construction, Erosion and Sediment Control for stormwater Management Plan of new Development (Section 4.9.4.7)” to the “Regulations Governing the Subdivision of Land”. The adopted regulations were based on the Office of Massachusetts Attorney General guideline sample posted on its website. The Planning Board has enforced the Regulation.	Continue the enforcement of the implemented Regulations
Revised					
2-4	Develop procedures for site plan review	DPW & All Boards	All construction activities to submit plan for review prior to start of construction	Internal Traffic Committee (ITC) reviewed all new development/site plans. ITC Staff includes most of the Town Departments. Planning Board has procedure to request, design implement, maintain, and enforce erosion control measures for all site plans and development projects.	Continue the process to review all new site plans and assure their compliance with the newly adopted Stormwater Regulations.
Revised					
3-4	Procedures for site inspections and enforcement	DPW & All Boards	Develop new procedures and documentation format	The new regulations mentioned on Item 1-4 included the procedure for site inspection and enforcement.	Continue enforcing new regulations implemented in 2008.
Revised					
4-4	Sanctions to ensure compliance	DPW & All Boards	To establish fines and penalties for non-compliance	Planning Board has the authority to issue and enforce stop work orders against any violator(s) of the Board’s Regulations which will include regulations listed on item 1-4	Continue to enforce and issue stop work orders, if needed, against any violator(s) of the Planning Board Regulations. Impose fines and penalties to any person who violates the new regulations implemented in 2008.
Revised					

5-4	Require control of waste from construction sites	DPW & Building Dept.	Develop a Management Plan aimed at recycling	Planning Board continued the Control and enforcement of any waste produced from any construction site.	Continue Control/enforcement work by Planning Board and Conservation Commission. The Town does not allow any waste to leave the construction site.
Revised					

4a. Additions

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-5 Revised	Post Construction Ordinance	DPW & All Boards		Enforced the “Rules and Regulations Governing Construction, Post Construction, Erosion and Sediment Control for Stormwater Management Plan of new Development (Section 4.9.4.7)” to the “Regulations Governing the Subdivision of Land”.	Continue the enforcement of the implemented regulations.
2-5 Revised	Long-Term O & M of BMP’s	DPW		Continued working toward the implementation of the maintenance plan.	Communicate with the Planning Board and Community Development to implement An Operation and Maintenance Plan of BMP’s
3-5 Revised	Inventory of all BMP’s within Town jurisdiction	DPW		Updated the newly developed “Environmental Database”. The databases information and records were shared among different Town Departments regarding private sewerage systems	Continue to update and maintain the Environmental Database.
Revised					
Revised					
Revised					

5a. Additions

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-6	Employee Training	DPW	Inform employees on what our goals are with this permit	Continued updating employees on the progress of the permit.	Continue updating employees on the progress of the permit.
Revised					
2-6	Municipal Vehicle Wash Area	DPW	To bring our wash area into compliance	N/A	N/A
Revised					
3-6	Material Management	DPW	Inventory and properly store all material used at DPW	DPW maintained a contract to dispose Hazardous material such as tires, waste oil, and others through professional and specialized companies. The Town of Hudson Board of Health adopted “Solid Waste Disposal Regulations” in order to reduce pollution and maintain a safe and healthy community. The Town of Hudson Board of Health adopted “Floor Drain Regulations” in order to reduce pollution to the Town Storm Drain and Sanitary Sewer Systems.	Continue to maintain a contract to dispose hazardous material such as tires, waste oil, and others through professional and specialized companies. Work with local companies, Board of Health to sponsor a Hazardous Waste Day. Maintain the enforcement of the adopted Solid Waste Disposal and Floor Drain Regulations. Maintain the protection of Zone A and Zone II through the enforcement of the above regulations.
Revised					
4-6	Catch Basin Cleaning Disposal Plan	DPW	Catalog and dispose of material from CB's properly	Town cleaned 100% of the Town catch basins in 2014 (Except for the ones which could not be opened or have elbows, which the Town DPW added to the list to be cleaned using the VAC Truck). DPW used VAC truck to clean catch basins that encountered problems during the year after it has been cleaned once.	Inspect majority of the Town catch basins in 2017. DPW continue using the VAC truck to clean catch basins and storm drain pipes that encountered problems.
Revised					
5-6	Stream Cleanup Day	DPW, Community, SuAsCo	To remove all debris from the rivers and banks	Cleaned Assabet River and expanded the days and waterways to be cleaned. Central Mass Mosquito Control Project	Continue cleaning Assabet River and other brooks and waterways. Continue communication with

Revised			(CMMCP) worked with the Town of Hudson DPW to clean many drainage ditches and blocked brooks where caused the brooks not to flow which were very difficult to clean with available Town equipment. The cleaning included dredging brooks and pick up and disposal of trash, debris and yard waste.	Continue working with Central Mass Mosquito Control Project (CMMCP) to dredge, clean, and maintain Town brooks and drainage ditches.
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6a. Additions

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 14
1-7	Installation of leaching catch basins using a S319 Grant (Lake Boon)	DPW	To install Catch basins and eliminate point source discharges	N/A. All new catch basin, if needed, which were installed in 2017 have sumps and hoods.	Town will replace any infiltration chambers either full or under capacity as part of the road reconstruction. Hudson DPW is planning to install about 500 LF of new infiltration chambers in many road projects.
Revised					
2-7	Educational Pamphlets	DPW & Board of Health	To distribute flyers to encourage inspection and improvement of septic systems around Lake Boon	Continued educating residents, and volunteers. Distributed educational pamphlets during the cleaning of the Assabet River and other waterways.	Town continues to distribute educational pamphlets through the Board of Health and Town Clerk Offices.
Revised					
3-7	Plan to upgrade catchbasins as part of road reconstruction projects	DPW	Upgrade catch basins to include sumps and hoods to all new catchbasins (if possible)	Constructed new 9 drain manholes and catch basins with 27 linear feet of precast concrete pipe. All catch basins have 4 feet sump and metal hoods. Also replaced 3 storm drain catch basins.	Plan to replace about 25 catch basins as part of road reconstruction. The proposed catch basins will be 5' Diameter (If possible) with 2'-4' sump, metal hoods to trap sand, debris, oil and other materials.
Revised					

7a. Additions

7b.

Part IV. Summary of Information Collected and Analyzed

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2016 through March 31, 2017)

We have not started any water quality test in general at this time. The recreation department does test the water at the Town Beach on Fort Meadow Reservoir – Centennial Beach. Testing results are attached and included in this report.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures (including drainage projects)	(\$)	\$425000
Total program expenditures since beginning of permit coverage	(\$)	Approx. 2,835,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		DPW Budget , MassDOT Chapter 90

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	4100
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.)	Y
Household Hazardous Waste Collection Days (every 18 Months)		
<ul style="list-style-type: none"> ▪ days sponsored 	(#)	1 (Planning twice a year in 2017 and was once every 18 months before 2013)

▪ community participation	(%)	N/A
▪ material collected Haz. Waste days are conducted by Intel and BP Trucking not Town	\$	0
School curricula implemented	(y/n)	Y

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	N	Y	N	N
▪ Erosion & Sediment Control	Y	Y	Y	Y
▪ Post-Development Stormwater Management	N	Y	Y	Y
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	N	Y	N	N
▪ Erosion & Sediment Control	Y	Y	Y	Y
▪ Post-Development Stormwater Management	N	Y	Y	Y

Mapping and Illicit Discharges

Outfall mapping complete	(%)	99
Estimated or actual number of outfalls	(#)	24
System-Wide mapping complete	(%)	99
Mapping method(s)		
▪ Paper/Mylar	(%)	85-90
▪ CADD	(%)	99
▪ GIS	(%)	99
Outfalls inspected/screened	(# or %)	50%
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	84
% of population on septic systems	(%)	16

Construction

Number of construction starts (>1-acre)	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public ⁽¹⁾	(#)	1
⁽¹⁾ DPW & Building Departments investigated the complain and the Developer fixed the problem	(#)	1

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections completed	(# or %)	100
Estimated volume of stormwater recharged	(gpy)	N/A

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1 or more
Total number of structures cleaned	(#)	2350
Storm drain cleaned	(LF or mi.)	150 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	150+/- tons
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Beneficial use
Cost of screenings disposal	(\$)	N/A

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$23,265
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$9.90/per basin
• Disposal cost**	(\$)	5,000
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	0
• % Structures cleaned with clam shells **	(%)	99
• % Structures cleaned with vector **	(%)	1

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	25
Qty. of sand/debris collected by sweeping	(lbs. or tons)	2,450 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Beneficial use
Cost of sweepings disposal	(\$)	N/A
Vacuum street sweepers purchased/leased	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	N
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	30%
▪ Herbicides	(lbs. or %)	30%
▪ Pesticides	(lbs. or %)	30%

Anti-/De-Icing products and ratios	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	100%
Pre-wetting techniques utilized	(y/n)	Y
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	Y
Estimated net reduction in typical year salt application	(lbs. or %)	0
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	N/A

% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	0
100% of salt/chemical pile(s) covered in storage shed(s) by May 2010	(y/n)	100