

**Municipality/Organization:** Town of Walpole, MA

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**EPA NPDES Permit Number:** MAR041167

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**MADEP Transmittal Number:** W-

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**Annual Report Number**

**& Reporting Period:** April 1, 2013-March 31- 2015

**No. 12**

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## **NPDES PII Small MS4 General Permit Annual Report**

Due May 1, 2015

### **Part I. General Information**

Contact Person: Landis Hershey, Conservation Agent, 508 660-7253  
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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: JIM JOHNSON

Title: Town Administrator

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Date:

4/27/2015

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## **Part II. Self-Assessment**

The Town of Walpole has completed the required self-assessment of the annual compliance review for the Phase II Stormwater Program. In accordance with the NPDES Phase II Stormwater requirements, the following topics were evaluated for the completion of the Annual Report:

1. Compliance with the Phase II Permit Conditions
2. Appropriateness of the Selected BMPs
3. Progress Towards Achieving the Program's Measurable Goals
4. Results of Any Information that has been Collected and Analyzed
5. Activities for the Next Reporting Cycle
6. Changes in Identified BMPs or Measurable Goals

The Town has determined that our municipality is in compliance with all permit conditions.

### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 13</b>
1A	Develop Stormwater Section of Town Website	Conservation	Continue to update website on current stormwater information	Continued to up-date website with current information.	<b>Updating town website with more information and better design</b>
R					
1B	Distribute Brochures and Fact Sheets to Businesses and Residents	Conservation Commission, and Health Department	Residential outreach	Worked with Neponset River Stormwater Partnership to develop educational materials for businesses, contractors, industrial and residents	<b>Print and distribute fact sheets and materials to residential, businesses, contractors and industrial.</b>
Revised	Endorsed Grant proposal with NRWA for workshops.	NRWA	Press Releases/workshops/Bylaw review	Health Department distributes brochures on water usage, pet waste pick up, composting and recycling.	
1C	Publish Articles on Stormwater Protection in Local Newspaper	Conservation		No new articles	Renewed outreach based on new permit requirements.
Revised					

## 2. Public Involvement and Participation

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b>	<b>Planned Activities – Permit year 13</b>
2A	Establish a Stormwater Telephone Hotline	Conservation Commission and Town Administration	Record number of telephone calls to hotline.	No recorded calls	Same as past year
Revised					
2B	Conduct River, Stream, and Pond Cleanups	Pond Management Committee	Cleaner streams as documented by before and after photographs.	Memorial Pond clean-up day by Town and Volunteers	As necessary
Revised					
2C	Prepare Press Release	Board of Health, Sewer and Conservation Department,	Copies of press articles.	Information posted on Health Department Facebook page	Continue on-going educational articles
Revised					

### 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 13</b>
3A	Develop Town Storm Drain Outfall Map	Engineering Department, Department of Public Works, Sewer and Water Department, and Consultant	All outfalls mapped by first year. Copy of storm drain map.	Outflow map updated as information comes to engineering dept.	Update and revise map as needed based on new development or differences observed in the field.
Revised				Work with Neponset Valley Stormwater Partnership (NVSP) on data	New developments and infrastructure added as they come in.  Develop procedures to map additional information as required by new permit.
3B	Develop Illicit Discharge Prohibition Bylaw	Conservation Commission, Planning Board, Board of Health, Sewer and Water Department, and Consultant	Illicite Discharge Bylaw was approved at Town meeting Fall 2006	Bylaw passed Town meeting and Approved by Attorney General Fall 2006.	Continue to enforce Bylaw.
Revised					
3C	Develop Illicit Discharge Detection and Elimination Plan and Implement Activities	Engineering Department, Board of Health, Town Administrator.	All outfalls examined by year 2. Sources traced and conclusion documented within one year of discovery.	Potential problems are investigated and addresses as needed.  Developed Draft IDDE plan with NVSWP	Engineering Department, Board of Health and water department work together to detect illicit discharges.  Develop IDDE Discharge Plan
Revised					
3D	Incorporate Information on Illicit Discharges into Public Education and Outreach Topics	Board of Health, Conservation Commission, Town Administrator.	Copies of materials.	Developed Draft Public outreach and educational Plan with NVSWP	Send out materials
3E	Identify Department to Take Stormwater Calls	Conservation Commission	Log of complaints and actions taken.	Same as last year	Same as last year
Revised					

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
4A	Develop Stormwater Management and Erosion Control Bylaws and Regulation	Conservation Commission	Adopted Bylaw	Stormwater and Erosion Control BMPs are reviewed and projects are permitted based on compliance with the Bylaw.	Conservation Commission will review projects for compliance with Stormwater and Erosion Control Bylaw.
Revised				Bylaw was reviewed by NVSWP for compliance with draft permit.  LID is encouraged	Continue to review Bylaw and revise as needed.
4B	Develop Guidance for Erosion Controls	Conservation Commission, Town Engineer.	Inspection checklist and documented inspections.	Sites are routinely inspected for compliance with Stormwater Management and Erosion control Bylaw.	Conservation Agent will develop a record keeping system for inspections and documentation.
Revised				Fast track permit requirements catch projects through building permits and provides guidelines for erosion control practices.	
4C	Identify Department to Take Stormwater Calls	Conservation Commission	Record number of phone calls to hotline, copies of advertisement.	Same as last year	Same as last year
Revised					

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

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 13</b>
5A	Develop Stormwater Management and Erosion Control Bylaw	Conservation Commission	Adopted Bylaw	Completed	On-going review and monitoring for compliance with Stormwater Management Bylaw.
Revised					Revise as needed
5B	Develop BMP Design Standards	Engineering Department, and Conservation Commission	Copy of design standards.	The Conservation Commission reviews and applies the standards available through the Stormwater Management Vol. 1 and Vol 2 of DEPs Stormwater Management Standards.	Conservation Commission and the Planning Board will continue to review BMP as per DEP Stormwater Management Standards and other applicable Engineering practices.
Revised				Zoning Bylaw revised	Encourage green design
5C	Develop and Implement Inspection Program	Conservation Commission, Engineering Department, and Highway Department,	Retain copies of maintenance reports received annually, plus records of inspections completed and results.	Inspections are routinely conducted by the Conservation Agent and the Town Engineer for projects that are subject to the Walpole Wetland Protection Bylaw, Stormwater Mangement Bylaw, Site Plan Review and subdivision control.	Develop formal system to collect Operation and Maintenance inspections of BMPs located on private property.
Revised				Began BMP data Base and inspection report form	

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 13</b>
6A	Clean Catch Basins	Highway Department	Clean all catch basins.	On-going program same as last years	Revise catch basin schedule to comply with the new MS4 permit including record keeping program
Revised					
6B	Sweep Streets in Town	Highway Department	Priority plan of sweeping based on water quality impact. Volume of sweepings collected.	On-going program same as last years	Revise street sweeping schedule as needed for new MS4 permit
Revised					
6C	Develop and Implement an Inspection and Maintenance Plan	Engineering Department, Conservation Commission, and Highway Department and Consultant	Written schedule. Records of inspections.	Structural BMPs were identified and inspected during outfall mapping activities. Locations of structures have been noted on the storm drain map.  Structural BMP's are reviewed as necessary.	Revise as required by new MS4 permit schedule
Revised					
6D	Evaluate Municipal Facilities Throughout Town for Potential Stormwater Impacts and Implement BMPs	Highway Department and Consultant	List of Improvements. Improvements completed by end of year 5.	Municipal facilities are reviewed as necessary and maintained on an as need basis.	Revise as required by new MS4 permit schedule
Revised					

6E	Identify Other Phase II Institutional Entities	Engineering Department and Consultant	List of State and Federal facilities with information on Phase II plans.	Completed year 2	Completed. Year 2.
Revised					
6F	Ensure Water Quality Improvements are Considered for Flood Projects	Engineering Department	Records of Flood Control Projects.	Continue to ensure that any proposed projects to alleviate flooding will also consider water quality improvements as part of the plan/design.	Continue to implement requirements of the Stormwater Management and Erosion Control Bylaw, Wetlands Protection Bylaw and Act, and Zoning Bylaw that requires review of projects for water quality and flood controls.
Revised				Zoning Bylaw re-write includes review of project based on DEP Stormwater Management Standards as revised in Vol. 1 and Vol. 2.	
6G	Conduct Town Employee Stormwater Training	Consultant (Town Administrator, Highway Department, and Police and Fire Departments)	Attendance sheet and copy of program.	Town Engineer and Conservation Agent participate in workshops and the NVSWP	Develop Training as requires by New MS4 permit.
Revised					

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

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Permit Year 13</b>
7A	Estimate Pollutant Loadings to Town Waters	Engineering Department and Consultant	Add subwatershed layer to drainage base map. Complete modeling and produce a table of priority water resources.	No additional goals met	Develop protocol as required by new MS4 permit
Revised					
7B	Categorize Drainage System	Engineering Department and Consultant	Table and map of system categorization	Town storm drain systems were categorized, with the assistance of a consultant, based on results of field investigations, existing drainage maps, and subdivision plan reviews.  Completed, and in Stormwater Management Master Plan, Appendix B	Categorize drainage system as required under the new MS4 permit as funds become available.
Revised					
7C	Evaluate Hydraulic Capacity in Areas of Concern	Engineering Department and Consultant	Report of system evaluation and modeling results.	Town storm drain systems experiencing hydraulic capacity issues were identified and modeled where necessary	Completed year 2.

Revised				<p>with the assistance of a consultant. Some hydraulic issues were found to be associated with clogged pipes that could be easily remedied.</p> <p>Completed and in Stormwater management Master Plan, Appendix B.</p>	
7D	Develop Conceptual Stormwater BMPs	Engineering Department and Consultant	Report of drainage system deficiencies.	Deficiencies have been identified and are currently being ranked in order of importance.	Completed year 2.
Revised				Completed and is part of Stormwater Management Master Plan, Appendix D.	Revise as need for new MS4 permit
7E	Implement Stormwater BMPs	Engineering Department and Consultant	As-built design plans.	Partnered with Neponset River Watershed Alliance on Three Town BMP Development Project 2009-12	Continue to revise to comply with new MS4 permit as funds are made available.
Revised					
7F	Construct Structural BMPs at Stormwater Discharges to Memorial Pond	Engineering Department and Consultant	Final design plans.	Construction of stormwater BMP for Memorial Pond has been completed. Final design plans are available through the Town's Engineering Department upon request.	No additional goals planned at this point
Revised					
7G	Apply for Grant Funds to Design and Install BMPs at Clarks and Cobbs Ponds	Engineering Department, Pond Management Committee, Town Administration, and Consultant	Copy of grant application and conceptual designs	Projects completed in 2007	No additional goals planned as this point

**7a. Additions**

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**7b. WLA Assessment -**

A TMDL report has been completed for fecal coliform bacteria in the Neponset River, which included a WLA for bacteria in Stormwater runoff for all communities within the river's watershed, including Walpole. The TMDL identified several sources of bacteria including illicit discharges to storm drains, leaking sanitary sewers, failing septic systems and Stormwater runoff.

The Town of Walpole's Phase II plan includes structural and non-structural BMPs to identify and address bacteria sources in stormwater. The Town has included public education BMPs, which will provide information to residents to address numerous sources of fecal coliform bacteria. Field investigations and dry weather sampling have also been conducted to identify and eliminate bacteria and other pollutant sources at storm drain outfalls as part of the Town's Illicit Discharge Detection and Elimination program. Field investigation efforts have effectively identified elevated bacteria levels at a storm drain system discharging to the Neponset River. Details for identifying the bacteria source are discussed below.

A Sewer System Evaluation Survey was also completed for Walpole's sewer system to report on any deficiencies. The analysis included inspection of sewer pipes and manholes to identify the worst parts of the system. The goal of the study was to develop a program that the Town could follow to make necessary repairs.

**Part IV. Summary of Information Collected and Analyzed**

No new information has been collected this year.

## Part V. Program Outputs & Accomplishments (OPTIONAL)

### Programmatic

Stormwater management position created/staffed		Walpole will be a part of a regional Stormwater Management Partnership through MAPC Grant and NRWA 2015-2016
Annual program budget/expenditures		Capital Budget Funds being used for Grant match

### Education, Involvement, and Training

Estimated number of residents reached by education program(s)		
Stormwater management committee established		no
Stream teams established or supported	supported	voluntary
Shoreline clean-up participation or quantity of shoreline miles cleaned	supported	voluntary
Household Hazardous Waste Collection Days (Board of Health)		
▪ days sponsored	#	2 (**See note)
▪ community participation	(%)	6%
▪ material collected	(tons or gal)	See note
School curricula implemented	No	
<i>A six town consortium is used to provide residents with additional hazardous waste days. Residents can participate during hazardous waste days at any participating town.</i> <i>*The Health Department conducts Household Hazardous waste days two times a year in May and October</i>		

## Legal/Regulatory

### Revised- Review and recommendations pending in 2015-2016

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with “X”)				
▪ Illicit Discharge Detection & Elimination				Fall 2006
▪ Erosion & Sediment Control				Spr 07
▪ Post-Development Stormwater Management				Spr. 07
Accompanying Regulation Status (indicate with “X”)				
▪ Illicit Discharge Detection & Elimination				
▪ Erosion & Sediment Control			X	Nov 07
▪ Post-Development Stormwater Management			X	Nov 07

### Mapping and Illicit Discharges – (on-going 2015-2016)

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	433
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened	(%)	95%
Illicit discharges identified	(#)	2
Illicit connections removed	(#)	0
<i>Town is working with a consultant to identify and eliminate illicit connections.</i>	(est. gpd)	
% of population on sewer	(%)	70%
% of population on septic systems	(%)	30%


### Construction

Number of construction starts (>1-acre)	(#)	10
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed <i>2-3 per week</i>	(# or %)	2-3 per week
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public	(#)	2

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections completed <i>Inspections ongoing as sites progress.</i>	(# or %)	0
Estimated volume of stormwater recharged Sites comply with DEP Stormwater guidelines	(gpy)	95%

### Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	½ CBs/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	2
Total number of structures cleaned	(#)	2400/yr
Storm drain cleaned	(LF or mi.)	1,200 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	60 tons

Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		<i>Off site disposal at an approved facility</i>
Cost of screenings disposal	(\$)	

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)	2-3/yr
Qty. of sand/debris collected by sweeping	(lbs. or tons)	60-70 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) <b><i>Street sweepings were disposed at the landfill up to last year. Starting in Permit Year 2, street sweepings will be disposed off site at an approved facility.</i></b>	(location)	See note
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased	(#)	1
Vacuum street sweepers specified in contracts	(y/n)	Yes

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	**see note
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
<b><i>**Pesticides are applied only when necessary. Six Town employees are licensed to apply pesticides (one commercial licensed) and two arborists. Town continually tries alternatives to reduce the use of chemicals. A written pesticide application policy is in place for the DPW Department throughout the Town. Schools use an IPM plan to reduce the use of pesticide.</i></b>		

Anti-/De-Icing products and ratios  <i>80:20 sand/salt mixture typically used. Straight salt used as needed.</i>	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	<i>CaCL2            applied by            spray or            sand/salt            conveyor.</i>
Pre-wetting techniques utilized	(y/n)	no
Manual control spreaders used	(y/n)	yes
Automatic or Zero-velocity spreaders used <i>Adjusts to track speed and roadway characteristics.</i>	(y/n)	
Estimated net reduction in typical year salt application <i>DPW Department conforms to the existing salt reduced routes.</i>	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	yes
Storage shed(s) in design or under construction	(y/n)	N/A