

Municipality/Organization: Town of Walpole, MA

EPA NPDES Permit Number: MAR041167

MADEP Transmittal Number: W- 040969

**Annual Report Number
& Reporting Period: No. 5 April 09**

NPDES PII Small MS4 General Permit Annual Report

Due May 1, 2009

Part I. General Information

Contact Person: Landis Hershey, Conservation Agent (508) 660-7253
Maggie Walker, Town Engineer 508 660-7211

Telephone _____ Email: lhershey@th.walpole.ma.us

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: Michael Boynton

Title: Town Administrator

Date: _____

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
1A	Develop Stormwater Section of Town Website	IT Department, Engineering Department, and Conservation	Number of hits annually cannot be measured separately because software/IT is not set up for this action.	Continue to up-date website with current information.	Continue to up-date website with current information.
R					
1B	Distribute Brochures and Fact Sheets to Businesses and Residents	Conservation Commission,	Goals met as finances allowed for copies.	Conservation Agent has created a Public Outreach Bulletin Board within Town hall for pertinent notices and information. Stormwater brochure distributed with tax bills 2007	Continue to update residents and businesses as need be.
Revised					
1C	Publish Articles on Stormwater Protection in Local Newspaper	Engineering Department, Conservation Commission	Clippings of articles and advertisements printed from the local newspaper.	Stormwater related articles published in local newspaper	Continue outreach through media.
Revised			Copy of video production		

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit year 7
2A	Establish a Stormwater Telephone Hotline	Conservation Commission and Town Administration	Record number of telephone calls to hotline.	Hotline has been established. ConCom Department receives calls in their office.	ConCom Department takes calls. Availability of this number and service is published.
Revised					
2B	Conduct River, Stream, and Pond Cleanups	Pond Management Committee	Cleaner streams as documented by before and after photographs.	of the Conservation Commission and Pond Committee work with local volunteers on clean up days. Tags purchased for catch basins to inform public regarding illicit discharges.	On-going clean – up effort with Pond Committee and members of Conservation Commission. Tags to be placed at catch basins.
Revised					
2C	Prepare Press Release	Engineering Department, Board of Health, Sewer and Conservation Department,	Copies of press articles.	Several articles have been printed in the Walpole Times regarding Stormwater Management efforts.	Prepare press release describing any ongoing Phase II program and stormwater related information will be made as they occur.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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.	Town storm drain completed in a GIS format with the assistance of a consultant during Year 1.	Update and revise map as needed based on new development or differences observed in the field. New developments and infrastructure added as they come in.
Revised					
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.	Examination of 90% of the outfalls has been completed during year 1 with the assistance of a consultant. 5 of the remaining 10% were done in year 2. (22 out of 433) Samples of dry weather flows were collected and further investigation was done.	Work with Engineering Department, Board of Health and water department to detect illicit discharges.
Revised					
3D	Incorporate Information on Illicit Discharges into Public Education and Outreach Topics	Board of Health, Conservation Commission, Town Administrator.	Copies of materials.	Conservation Agent has created a Public Outreach Bulletin Board within Town hall for pertinent notices and information.	Continue to up-date bulletin board.

Revised					
3E	Identify Department to Take Stormwater Calls	Conservation Commission	Log of complaints and actions taken.	Hotline has been established. ConCom Secretary receives calls in their office..	ConCom Secretary takes calls.
Revised					Availability of this number and service is published.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
4A	Develop Stormwater Management and Erosion Control Bylaws and Regulation	Conservation Commission	Adopted Bylaw	Stormwater Management and Erosion Control Bylaw was passed at Spring Town meeting 2007.	Conservation Commission reviews projects for compliance with Stormwater and Erosion Control Bylaw.
Revised					

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 continues to review building permit applications, stormwater management and erosion control permits and wetland applications for erosion control practices.
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.	Hotline has been established. ConCom Secretary receives calls in their office..	ConCom Secretary takes calls.
Revised					Availability of this number and service is published.

--	--	--	--	--	--

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
5A	Develop Stormwater Management and Erosion Control Bylaw	Conservation Commission	Adopted Bylaw	A Stormwater Management and Erosion Control Bylaw adopted Spring 2007.	On-going review and monitoring for compliance with Stormwater Management Bylaw.

Revised					
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					
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.	Inspections are on-going
Revised					

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
6A	Clean Catch Basins	Highway Department	Clean all catch basins.	Catch basin cleaning is an ongoing operation of the Highway Department. Town owned catch basins are cleaned annually, during the Spring season.	Catch basin cleaning operations will continue on an annual basis.
Revised				Typically, 1/2 of basins per year are cleaned.	

6B	Sweep Streets in Town	Highway Department	Priority plan of sweeping based on water quality impact. Volume of sweepings collected.	Street sweeping is an ongoing operation of the Highway Department. Town owned streets are swept annually, during the Spring season.	Street sweeping operations will continue on an annual basis.
Revised				Quantities of sweepings collected throughout the Town have been recorded to help develop a prioritization plan.	Work on prioritizing areas and refining sweeping schedule.
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.	Document inspection results and develop a written inspection schedule.
Revised					Again due to budget cuts Engineering GIS operator/I field engineering aide position was cut. Town will try to conduct inspections with existing staff.
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.	Evaluations of municipal facilities have been completed. A draft report identifying potential stormwater impacts and BMPs has been completed.	Town parking lot complete.
Revised					
6E	Identify Other Phase II Institutional Entities	Engineering Department and Consultant	List of State and Federal facilities with information on Phase II plans.	Phase II institutional entities have been identified in the Town of Walpole.	Completed. Year 2.
Revised				The report of Phase II institutional entities' plans was completed.	
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.	NOI specified to begin this BMP in Permit Year 2, however, due to reduction in staff and budgets, this goal was not completed. Town will endeavor to complete this item this year.	Add to budget when possible.
Revised					

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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.	Pollutant loadings to water bodies throughout the Town have been modeled using PCSWMM. A sub watershed data layer was created and added to the Town's GIS base map. This work was completed with the assistance of a consultant.	Reviews as needed.

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 near 2. Add new storm drains are needed.
Revised				Completed, and in Stormwater Management Master Plan, Appendix B	
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 with the assistance of a consultant. Some hydraulic issues were found to be associated with clogged pipes that could be easily remedied.	Completed year 2.
Revised				Completed and in Stormwater management Master Plan, Appendix B.	
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.	
7E	Implement Stormwater BMPs	Engineering Department and Consultant	As-built design plans.	Clark's and Cobb's Pond projects completed 2007	Review possible utility option
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.	
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	Projects complete

7a. Additions

--	--	--	--	--	--

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

High bacteria counts were discovered in a stormwater sample collected from a storm drain system in US Route 1, which discharges to the Neponset River in July 2003. This storm drain system is under the jurisdiction of Massachusetts Highway Department, but partially located within Walpole. The site has tied into the municipal sewer system.

Several other stormwater samples have been collected throughout the Town at storm drain outfalls experiencing dry weather flows. Lab results from these locations have been evaluated for potential indications of illicit connections. Locations where stormwater samples do indicate a potential illicit connection will receive further attention during the upcoming reporting year.

Gabions were installed at the Agriculture School to mitigate stormwater flow from animal pastures discharging to municipal waters.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	No	
Annual program budget/expenditures. No additional [position will be allowed due to tight budget.	No	

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	All tax payers	
Stormwater management committee established	No	
Stream teams established or supported	supported	
Shoreline clean-up participation or quantity of shoreline miles cleaned	supported	
Household Hazardous Waste Collection Days		
▪ 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>**Walpole conducted two Hazardous Waste Collection Days, 5-1-04, and 10-2-04. Materials collected during Permit Year 2 include: 440 gal of oil, 95 car batteries, 300 tires, 124 propane tanks, and 253 tvs/monitors.. Approx. 185 cars made deliveries of materials..</i>		

Legal/Regulatory

	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

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)	(#)	6
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	(#)	20

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)	

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.) <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>	(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 %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
<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>		

Anti-/De-Icing products and ratios <i>80:20 sand/salt mixture typically used. Straight salt used as needed.</i>	% NaCl % CaCl ₂ % MgCl ₂ % 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