



April 30, 2010

Ms. Glenda Velez
US EPA
5 Post Office Square – OEP06-01
Boston, MA 02109-3912

**Re: NPDES Phase II Stormwater General Permit
2009-2010 Annual Report
Town of Ayer, MA**

Dear Ms. Velez:

On behalf of the Town of Ayer, MA, please find enclosed the NPDES Phase II Stormwater General Permit 2009-2010 Annual Report. The Annual Report has simultaneously been filed with the Massachusetts Department of Environmental Protection (MassDEP).

Should you have any questions or require any additional information, please do not hesitate to contact me at 978-692-9090 x308.

Sincerely,

AMEC Earth & Environmental, Inc.

A handwritten signature in black ink, appearing to read "Rich Niles". The signature is stylized and cursive.

Rich Niles
Water Resources Project Manager

cc: Fred Civian, MassDEP, Boston Office
Dan Nason, Superintendent of Public Works, Town of Ayer, MA

Enclosure – NPDES Phase II Small MS4 General Permit 2009-2010 Annual Report

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Municipality/Organization: Town of Ayer

EPA NPDES Permit Number: MAR04-1179

MaDEP Transmittal Number: W- 040750

**Annual Report Number
& Reporting Period: No. 7: May 1, 2009-April 30, 2010**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Daniel F. Nason, CPESC, CPSWQ **Title:** Superintendent of Public Works

Telephone #: 978-772-8240 **Email:** dpwsupt@ayer.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: *JL Ritter*

Printed Name: J. Jeffrey Ritter

Title: Interim Town Administrator

Date: 4/30/10

Part II. Self-Assessment

The Town of Ayer, Massachusetts has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions. As discussed in previous reports, the individuals heading up the Town's Stormwater Management Program (SWMP) have changed over the last 7 years, which delayed the initial progress of some planned activities, as well as additional delay during the transition of program responsibilities. However, the Town has made significant progress implementing its SWMP in the past few years and the Stormwater Committee continues to meet to review and develop the program. Daniel F. Nason, DPW Superintendent, was assigned the responsibility of handling the Stormwater Management Program for the Town of Ayer in February 2009 and began evaluating and implementing the program needs and activities.

Over the past year the progress of the SWMP was strained due to budget limitations and the current economic climate became a driving force to develop a more sustainable funding source for SWMP activities. On behalf of the Town, DPW obtained grant funding to evaluate the feasibility of developing a Stormwater Utility Fund. The Town's consultant made a presentation to the Board of Selectmen on January 5, 2010 related to the stormwater utility feasibility study. The current and future needs for the stormwater management program were discussed. A public meeting was held on March 2, 2010 to present the initial results of the study, which is expected to be finalized in May 2010.

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 7	Planned Activities – Next Permit Term
PE1 Revised	Educational materials	DPW	Create educational flyers re stormwater Distribute flyers to residents at two or more events	Posters were displayed in the Town Hall, DPW Office, Library and schools. Materials by the SuAsCo Watershed Community Council were reviewed after which the DPW decided to develop its own materials.	Continue to display posters and make pamphlets available at public places and events. Develop a method for tracking the amount of materials distributed at each location/event.
PE2 Revised	Cable TV info spots	DPW	Create 1 infomercial about stormwater by 5/06 Summer 2007	10 copies of the EPA video “After the Storm” were purchased and distributed to the Town Hall, Library, School Department, and Cable Access Channel. The opportunities to show and/or broadcasting the video at each location were discussed. The Board of Selectmen presentation discussed under BMP PP2 was broadcast on local TV.	Continue to make video available on local TV and other locations for viewing or rental. Develop methods for tracking viewing/rentals.
PE3 Revised	Drain Stenciling	DPW	Stencil storm drains by 5/06 25% of storm drains marked by Fall 2007	119 storm drains were stenciled in Town this permit term for a total of 212 in the last 3 years. DPW maintained a list of marked storm drain locations.	Continue to complete stencils in high and medium priority sub-basins and refresh previous stencils as needed.
PE4 Revised	Lawn Care Workshops	SWSC/DPW	Hold 1 workshop by 5/07	Completed in 2007. No action was planned for Year 7.	No further action is planned at this time. Will look into additional workshops for next permit term.
PE5 Revised	Educational Displays on stormwater mgt	SWSC/DPW	Create 1 display for use at town functions by 5/08	Posters were displayed in the Town Hall, DPW, Library and schools. Materials from EPA’s website were reviewed for use in a stormwater display.	Continue to update and display posters at public places. Develop a stormwater display through the Stormwater Committee and use at Town functions.

1a. Additions

None at this time.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7	Planned Activities – Next Permit Term
PP1 Revised	Establish Committee	Board of Selectmen	Est. committee by 11/03 July 2007	The Stormwater Committee met on May 12, 2009 to discuss the status of the stormwater program and roles/responsibilities for BMP tasks.	Committee will continue to meet on stormwater issues and coordinate for the completion of BMP tasks.
PP2 Revised	Public Info Meetings	SWSC	2 meetings in 2004 One meeting annually, # of people attended	The Town’s consultant made a presentation to the Board of Selectmen on January 5, 2010 related to a stormwater utility feasibility study. The current and future needs for the stormwater management program were discussed. A public meeting was held on March 2, 2010 to present the initial results of the study.	Continue to hold Public Info Meetings related to stormwater issues.
PP3 Revised	Annual Roadside Cleanup	SWSC/DPW	Schedule 1 cleanup day by 4/05 1 cleanup annually, # participants	An area wide Town Cleanup was held on 4/10/10. Approximately 150 residents participated and ~12-15 cubic yards of trash were collected. A town volunteer, who also heads the Recycling Committee, has been coordinating the program. An article with the results of the cleanup event was published in the local paper.	Continue to organize resident roadside cleanup activities and track/report results.
PP4 Revised	Establish neighborhood watch groups Establish a Stormwater Hotline	SWSC/DPW	Create 4 groups by 4/06 Hotline established, # calls received & follow-up actions	The Stormwater Hotline is advertised on local TV and posted on the DPW web page. No calls were received regarding dumping, but several calls related to flooding were received and addressed by DPW.	Continue to record calls and follow-up actions to address stormwater issues.
PP5 Revised	Reforestation Native Tree Replanting Program	ConsCom And Tree Warden	Establish plan to require/encourage planting of cleared areas	Currently there is no funding source for a native tree replanting program. ConsCom requires native tree/shrub species to be planted based upon specific wetland permits on a need basis.	Continue to evaluate potential program funding sources.

2a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7	Planned Activities – Next Permit Term
PP6	Hazardous Waste Collection Program	Ayer Recycling Committee	Conduct yearly hazardous waste collection day (HWCD)	Household hazardous waste collections were co-sponsored with the North Central Regional Solid Waste Cooperative at Devens on May 2, 2009 and Lunenburg on September 26, 2009. Approximately 2,772 pounds of hazardous waste was collected from 33 Ayer residents over the two events. The Ayer Transfer Station collected 835 gallons of waste oil in 2009.	Continue to sponsor and advertise hazardous waste collections and incorporate information on illegal dumping. Continue tracking resident participation and collection results. Nine events are tentatively scheduled in 2010 for May 1 st , Sept. 1 st & 4 th , Oct. 2 nd & 6 th , Nov. 3 rd & 6 th , and Dec. 1 st & 4 th .
Revised					
PP7	Mercury Waste Collection for Residents	Ayer Recycling Committee & DPW	Make mercury waste collection available to residents, # materials collected	Information related to the collection of mercury product at the Transfer Station was advertised on the DPW web page. The Town continued to work with Covanta to collect mercury products by setting up collection boxes at the local Aubuchon Hardware store and Transfer Station. 522 various bulbs, 19-4” thermometers, 56 thermostats, 3 electrical switches and 9,994-feet of straight bulbs have been collected. A total of 3,178 grams of elemental mercury was collected. Posters were displayed at the Transfer Station and the DPW Office.	Continue to make mercury waste disposal available to residents and track results.
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
ID1	System Mapping	DPW	Complete system map by 3/05	The Town previously updated the drainage map with all known and visible catch basins and outfalls.	Continue to update the drainage map as structures are located (if any unidentified structures still exist), and as new developments are constructed.
Revised	Drainage System Mapping		9/06		
ID2	ID illicit discharges	DPW	Conduct inspections by 11/05	No obvious illicit discharges were identified during the permit term. DPW obtained a standard operating procedure (SOP) for field inspection by Town staff and a standardized form for recording results.	Train staff for dry weather inspections using the existing SOP and continue outfall inspections for potential illicit discharges.
Revised	Screen Outfalls for Illicit Discharges	Volunteer & Consultant	Record of inspections & follow-up actions		
ID3	Prohibit illicit discharges	DPW/BoH	Establish regulatory mechanisms to prohibit by 4/06	As discussed in the Year 6 annual report, the Illicit Discharge Bylaw was adopted at the May 2008 Annual Town Meeting. No further action is needed at this time.	No further action needed.
Revised	Develop a Local Illicit Discharge Prohibition		Spring 2008		
ID4	Cost of illicit discharges	DPW	Plan for removal options	No illicit discharges were found.	Evaluate program and funding options as needed based on the presence/ discovery of illicit discharges.
Revised	Illicit Discharge Removal Options				
ID5	Eliminate illicit discharges	DPW	Show # of re-routed connections	No illicit discharges were found during this permit year.	Remove illicit discharges as they are identified.
Revised			Illicit discharges removed within 1 year of discovery		

3a. Additions

ID6	Public Education for Illicit Discharges	SWSC & DPW	Distribute education materials at least annually	The DPW webpage was updated with information related to illegal dumping and the impact to waterways. The Stormwater Hotline was listed with these messages. Information regarding the hazardous waste collection events was posted on the Town's webpage and advertised through flyers and local press releases.	Continue to incorporate illicit discharge information into existing public education and outreach topics. Develop/adapt educational materials to target all types of illicit discharges.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
CRC1	Establish water quality benchmarks	DPW	Develop score sheet and do Rd 1 of testing	As discussed in the Year 6 annual report, the Stormwater Bylaw was adopted at the May 2008 Annual Town Meeting. This Bylaw included criteria/requirements to address water quality.	See BMP CRC4.
Revised	Select Existing Water Quality Criteria		Water quality criteria selected		
CRC2	Site Inspection Criteria	DPW	Develop site inspection criteria by 5/05	Water, Sewer, and Highway Departments conduct inspections on all of their projects using the standardized inspection form. The Town's consultant conducted numerous inspections for subdivision projects.	Continue to inspect all sites and update inspection form as needed. Develop a central location for inspection forms. Log issues and corrective actions taken.
Revised			Standardized inspection form		
CRC3	Staff training re site inspections	DPW	Train all applicable staff by 5/06	No additional training took place during this permit year; however, DPW reviewed the curriculum from prior year training sessions. DPW also evaluated potential joint training sessions by a consultant.	Continue to train staff using existing curriculum and/or through joint training sessions.
Revised			Training program & record of staff trained		
CRC4	Tighten regulatory controls	DPW/ConsCom	Review existing regs and propose updates as needed by 5/06	As discussed in the Year 6 annual report, the Stormwater Bylaw was adopted at the May 2008 Annual Town Meeting. Draft regulations were reviewed by the Stormwater Committee in 2009 and are under consideration by the Planning Board.	Finalize and implement the draft regulations through the Planning Board.
Revised	Develop Requirements for Sites >1 acre		Spring 2008		
CRC5	Maximum compliance	DPW	Achieve overall compliance	Erosion and sediment control issues were identified and addressed by the appropriate Town department. DPW evaluated methods to track erosion and sediment control issues.	Continue to address erosion and sediment control issues and begin recording corrective actions.
Revised	Erosion & Sediment Control Compliance		Record of inspections & follow-up actions		

4a. Additions.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
CRC6 Revised	Construction Waste Mgt	DPW/Building Dept.	# of inspections in 2006 Record of inspections & follow-up actions	Inspections at on-going construction sites were completed and construction waste was controlled as needed. DPW evaluated methods to track erosion and sediment control issues.	Coordinate inspections with BMPs CRC2 and CRC5 and begin recording corrective actions.
CRC7 Revised	Establish a Procedure for the Receipt of Information Submitted by the Public	SWSC/DPW	# of issues reported, record of enforcement actions	One call was received related to heavy rains and runoff concerns at a subdivision. DPW responded to the site and the developer addressed the issue to the satisfaction of the Town. The Stormwater Hotline number was also advertised on local TV.	Continue to log calls and address construction site erosion issues.

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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
RC1	ID BMPs	DPW/ConsCom /Planning Board	Review existing regs and draft new as needed by 12/05 Fall 2007	As discussed in the Year 6 annual report, the Stormwater Bylaw was adopted at the May 2008 Annual Town Meeting. This Bylaw included criteria/requirements to address BMP design. Draft regulations were reviewed by the Stormwater Committee in 2009 and are under consideration by the Planning Board.	Finalize and implement the draft regulations through the Planning Board.
Revised	Incorporate BMP Design Criteria				
RC2	Acceptance of new regs/bylaws as needed	DPW/ConsCom /Planning Board	Codify new by 5/06	As discussed in the Year 6 annual report, the Stormwater Bylaw was adopted at the May 2008 Annual Town Meeting.	See BMP RC1.
Revised	Develop Requirements for Sites >1 acre		Spring 2008		
RC3	Construction Waste Mgt	This BMP was removed from this section and added to Section 4, under BMP CRC6 to be consistent with the requirements for construction site management.			
Revised					
RC4	Evaluate Water Quality	DPW	Round 2 of testing	As discussed in the Year 6 annual report, the Stormwater Bylaw was adopted at the May 2008 Annual Town Meeting. This Bylaw included criteria/requirements to address water quality.	See BMP RC1.
Revised	Select Existing Water Quality Criteria		Water quality criteria selected		

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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
GH1 Revised	Survey facilities and existing practices, etc	DPW	Do self survey	Municipal industrial facilities were reviewed for pollution prevention practices. Hazardous wastes and materials are contained and stored indoors to avoid stormwater contact. The Sewer Dept. continued to inspect the o/w separator located within the DPW yard for the vehicle wash system. DPW stopped using sand for winter road treatments and utilized a salt catalyst for no net salt application increase. See Part IV of this report.	Continue existing pollution prevention practices at municipal facilities. Continue to utilize Contractor to remove catch basin cleanings from DPW stock yard. Continue to inspect and maintain oil/water separator as needed, use inspection form and log findings.
GH2 Revised	Develop training manual	DPW	Create manual by 12/04	An inspection curriculum was previously developed. SPCC, SWPPP, and Environment Operation Procedures manuals are in use.	Continue to use the current manuals for pollution prevention and good housekeeping activities.
GH3 Revised	Train Employees	DPW	Train ALL staff by 5/05 Incorporate new training topics	Copies of the video “After the Storm” were provided for DPW foremen (water, wastewater, highway, solid waste) and two copies were obtained for the DPW office. DPW also reviewed the curriculum from prior year training sessions and evaluated a joint training session by a consultant.	View video throughout the year and continue other DPW employee training for pollution prevention and good housekeeping.
GH4 Revised	Implement maintenance schedule	DPW	Implement veh and facilities maintenance schedule by 5/06	Maintenance schedules were updated.	Ensure maintenance schedules are maintained to minimize potential stormwater impacts.
GH5 Revised	Evaluate Program	DPW	ID of facilities with controls in place by 5/07 Fall 2007	DPW continued to review the need to update existing facility planning and training documents. Funding is currently not available for program elements. As discussed in this annual report, the Town completed a feasibility study to potentially develop a stormwater utility.	Re-evaluate municipal facilities and operations and develop/implement BMPs as needed and as appropriate. Continue to evaluate funding mechanisms and/or sources for program implementation.

6a. Additions

GH6	Municipal Facility Plans	DPW	Compliance with SWPPP & SPCC Plans	The Town maintained the SWPPP for the Wastewater Treatment Facility and SPCC Plan for the DPW Facility. The plans assist with pollution prevention at these facilities.	Ensure compliance with the facility plans at the Wastewater Treatment Plant and DPW Facility.
Revised					

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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
7.1	TMDL study	Department of Defense; NRWA		The next steps for developing a water quality strategy are pending the reissuance of the Phase II Permit.	Review the Phase II Permit once finalized and develop an implementation strategy under the new permit and the Town’s SWMP.
Revised	Evaluate TMDL Studies & Status of Town BMPs to Address Impaired Waters	SWSC/DPW	Review Memo and Recommended Next Steps		The Town anticipates that the strategy will consider the goals of the draft TMDL*, available resources, actions currently being undertaken by Ayer and actions by others under the MA DEP RIA Permit.
Revised					

*A draft phosphorous TMDL study is available for the Nashua River, which incorporates the majority of Ayer.

Part IV. Summary of Information Collected and Analyzed

The Town has nearly completed the town-wide drainage system map, including outfall locations. Approximately 800 structures and 80 outfalls have been identified based on recent efforts to update the drainage map.

Legal/Regulatory

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

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	80
System-Wide mapping complete	(%)	95%
Mapping method(s)		
▪ Paper/Mylar	(%)	95%
▪ CADD	(%)	90%
▪ GIS	(%)	
Outfalls inspected/screened	(# or %)	0
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	97%
% of population on septic systems	(%)	3%

Construction

Number of construction starts (>1-acre)	(#)	None
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	N/A
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	0
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 completed	(# or %)	100%
Estimated volume of stormwater recharged	(gpy)	TBD

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1/yr
Total number of structures cleaned	(#)	800
Storm drain cleaned	(LF or mi.)	
Qty. of cleanings /debris removed from storm sewer infrastructure	(lbs. or tons)	200-300 tons
Disposal or use of cleanings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Removed by outside Contractor
Cost of cleanings disposal	(\$)	29.50 / ton

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1/yr
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	7/yr
Qty. of sand/debris collected by sweeping	(lbs. or tons)	Unknown
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Store, then dispose of
Cost of sweepings disposal	(\$)	29.50 / ton
Vacuum street sweepers purchased/leased	(#)	N/A
Vacuum street sweepers specified in contracts	(y/n)	N/A

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

Anti-/De-Icing products and ratios	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	Ice-Ban (MgCl ₂) added to salt stockpile, sand eliminated*
Pre-wetting techniques utilized	(y/n)	N
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	N
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

*The Ayer DPW eliminated the use of sand for winter road treatments to reduce the financial and environmental impacts of sand application and removal (i.e., street sweeping & catch basin cleaning). The addition of Ice-Ban to the salt stockpile improved the effectiveness of salt treatments and did not require an increase in salt application rates or total volume.