

Municipality/Organization: Town of Ayer

EPA NPDES Permit Number: MAR04-1179

MADEP Transmittal Number: W- 040750

**Annual Report Number
& Reporting Period:** No. 9: May 1, 2011 -April 30, 2012

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Mark Wetzel, P.E.

Title: Superintendent of Public Works

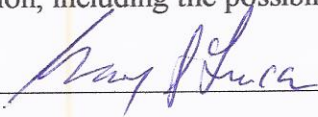
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Certification:

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: Gary J. Luca

Title: Chairman, Board of Selectmen

Date:

5/1/2012

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.

The Superintendent of Public Works directly managed the stormwater program with various Town Departments, as needed, to implement each of the BMPs. The DPW maintains the stormwater hotline and stormwater information on their website (http://www.ayer.ma.us/pages/AyerMA_DPW/storm).

The Town would like to note the following additional activities and progress during the Year 9 reporting period:

- Ayer was designated a “Green Community” of the Commonwealth of Massachusetts in July 2011. A Green Community Committee was established by the Board of Selectmen to investigate opportunities to develop programs and projects to foster energy conservation, energy efficiency, renewable energy generation and sustainability planning throughout the community. The Committee shall develop and recommend approaches for influencing the town residents and businesses to maximize their environmental sustainability through educational outreach, information programs and incentives.
- The Town voted to approve the creation of a Stormwater Utility at the May 2001 Town Meeting.
- DPW’s storm drain stenciling program was highlighted in the local newspaper, the *Nashoba Public Spirit*.
- DPW conducted the first “Ayer Public Works Day” on May 16, 2011 for the public and students to learn about public works operations, including stormwater and water quality.
- “A Cleaner Ayer”, an area wide Cleanup was conducted on April 21, 2012. Similar to past years, approximately 150 residents participated.

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 9	Planned Activities – Next Permit Term
PE1	Educational materials	DPW	Create educational flyers re stormwater	DPW adapted existing materials available through EPA's website. Posters, brochures, fact sheets, bookmarks and a crossword puzzle were distributed or displayed at the DPW office, Library, Town Hall and Schools based on the audience.	Continue to display existing materials and evaluate the need for additional or new educational materials to address specific behaviors and target audiences. Track the distribution of take-away materials.
Revised			Distribute flyers to residents at two or more events; create a stormwater webpage	DPW maintained a "Stormwater Information" webpage under the DPW home page which includes links to stormwater fact sheets and the Stormwater Hotline number.	Evaluate a tracking system for calls to the Stormwater Hotline.
PE2	Cable TV info spots	DPW	Create 1 infomercial about stormwater by 5/06	The 10 copies of the EPA video "After the Storm" were still available for viewing at the Town Hall, Library and School Department. The video was also displayed on the local Cable Access Channel.	Continue to communicate with the Library, School Department, and Cable Access Channel ways in which they can use the video and promote its use to raise public awareness.
Revised			Summer 2007	DPW linked EPA's "After the Storm" website on their webpage.	
PE3	Drain Stenciling	DPW	Stencil storm drains by 5/06	DPW continued their storm drain stenciling program, for a total of over 600 stencils in the last 5 years. DPW completed marking of all storm drain locations as part of street sweeping activities, using metal markers for drains in the highly visible locations (e.g., downtown) of Town. DPW maintains a list of marked storm drain locations. An article about the storm drain marking headlined the <i>Nashoba Public Spirit</i> newspaper.	Refresh stencils and markers as needed. Maintain a database of marked locations.
Revised			25% of storm drains marked by Fall 2007		

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
PE4 Revised	Lawn Care Workshops	SWSC/DPW	Hold 1 workshop by 5/07	Completed in 2007. No workshops were conducted in Year 9.	Continue workshops as staff time and resources are available.
PE5 Revised	Educational Displays on stormwater mgt	SWSC/DPW	Create 1 display for use at town functions by 5/08	DPW held the first annual “Ayer Public Works Day” on May 16, 2011 for the public and students to learn about public works operations, including stormwater and water quality. To support the Public Works Day, the Town invested in a 3-dimensional stormwater model to show how pollutants in runoff can impact the Town’s water resources, which the Town intends to continue to use for public education. Articles advertising the “Ayer Public Works Day” and the results were published in the <i>Nashoba Public Spirit</i> newspaper. Various materials were displayed/updated at the Town Hall, DPW, Library and schools (see BMP PE 1).	Update and/or refresh posters/materials annually and continue to display them at public places. Evaluate additional opportunities/events to display educational materials. Incorporate stormwater model.

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 9	Planned Activities – Next Permit Term
PP1 Revised	Establish Committee	Board of Selectmen	Est. committee by 11/03 July 2007	Stormwater Committee members (DPW, Conservation & Town Administrator) met on multiple occasions. The roles/responsibilities for BMP tasks were managed directly by DPW with each Town Department, as needed. Ayer was designated a “Green Community” of the Commonwealth of Massachusetts in July 2011. A Green Community Committee was established by the Board of Selectmen to investigate opportunities to develop programs and projects to foster energy conservation, energy efficiency, renewable energy generation and sustainability planning throughout the community. The Committee shall develop and recommend approaches for influencing the town residents and businesses to maximize their environmental sustainability through educational outreach, information programs and incentives.	The Stormwater Committee will continue to evaluate funding options for stormwater management activities (e.g., utility), public outreach initiatives, and regulations to support the stormwater bylaws. The Green Community Committee will evaluate opportunities to include sustainable practices throughout the community, including stormwater management and water conservation. DPW will continue to coordinate directly with Town Departments for BMP tasks.
PP2 Revised	Public Info Meetings	SWSC	2 meetings in 2004 One meeting annually, # of people attended	Although there were no Public Informational Meetings conducted in Year 9, the Ayer Public Works Day was open to the public and well attended. The Town posted the Stormwater Committee meetings at the Town Hall in accordance with state regulations.	Continue to provide adequate public notice and host Public Informational Meetings annually to discuss stormwater issues and needs, including funding. Track the number of attendees at each meeting.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
PP3 Revised	Annual Roadside Cleanup	SWSC/DPW	Schedule 1 cleanup day by 4/05 1 cleanup annually, # participants	“A Cleaner Ayer”, an area wide Cleanup was conducted April 21, 2012. Similar to years past, approximately 150 residents participated collecting ~12-15 cubic yards of trash. A town volunteer, who also heads the Recycling Committee, coordinated the program. An article with the results of the cleanup event will be published in the local paper and on the Town’s website.	Continue to organize at least one cleanup activity annually and track participation and volume collected. Consider streams and additional priority cleanup priority areas.
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 was advertised on local TV and posted on the “Stormwater Information” webpage under the DPW home page.	Continue to promote the hotline through the web page, local TV, and stormwater educational materials. 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 to fulfill the requirements of specific wetland permits.	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 9	Planned Activities – Next Permit Term
PP6 Revised	Hazardous Waste Collection Program	Ayer Recycling Committee	Conduct yearly hazardous waste collection day (HWCD)	The Town, as part of an Intermunicipal Agreement among 9 communities in the Devens Region, created the “Devens Regional Household Hazardous Products Collection Program” which provided 20 events between June 2011 and April 2012 for Ayer residents.	Conduct hazardous waste collections as part of the regional program and incorporate/advertise information to prevent illegal dumping. Begin tracking Ayer resident participation and waste collection results.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
PP7	Mercury Waste Collection for Residents	Ayer Recycling Committee & DPW	Make mercury waste collection available to residents, # materials collected	Posters were displayed to raise awareness of mercury collection at the Transfer Station and the DPW Office. Information related to the collection of mercury products at the Transfer Station was advertised on the DPW web page.	Continue to promote mercury waste collection boxes through posters and the DPW web page.
Revised				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.	Continue to track results of mercury collection activities.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	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. The Town worked with the Montachusett Regional Planning Commission (MRPC) to potentially map parcels and evaluated options/ funding for additional mapping.	Continue to update the drainage map as structures are located and as new developments are constructed. Continue to work with NRWA to update the parcel maps and consider additional mapping efforts that relate to stormwater management. The MRPC has mapping activities planned for 2012.
Revised	Drainage System Mapping		9/06		
ID2	ID illicit discharges	DPW	Conduct inspections by 11/05	No illicit discharges were observed during the permit term.	Train new staff on how to conduct dry weather inspections using the existing SOP and refresh training annually for all staff. 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	The Illicit Discharge Bylaw (Article XLVII of the General Bylaws) was adopted in May 2008. The Town amended the Bylaw at the October 25, 2011 Special Town Meeting to revise language related to enforcement.	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 during this permit year.	No further action needed.
Revised	Illicit Discharge Removal Options				
ID5	Eliminate illicit discharges	DPW	Show # of re-routed connections	No illicit discharges were found during this permit year.	No further action needed.
Revised			Illicit discharges removed within 1 year of discovery		

3a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
ID6	Public Education for Illicit Discharges	SWSC & DPW	Distribute education materials at least annually	The “Stormwater Information” webpage under the DPW home page continued to include information related to illegal dumping, associated impacts to waterways, and the Stormwater Hotline. Information targeting a variety of types of illicit discharges is presented in the various education materials discussed under BMP PE1.	Promote the use of the Stormwater Hotline to report illicit discharges in an educational brochure distributed to residents, at public events, and public places.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
CRC1 Revised	Establish water quality benchmarks Select Existing Water Quality Criteria	DPW	Develop score sheet and do Rd 1 of testing Water quality criteria selected	The Stormwater Bylaw (Article XLVII of the General Bylaws) was adopted in May 2008. This Bylaw included criteria/requirements to address water quality. The Town amended the Bylaw on October 25, 2011 to revise language related to exempt activities and enforcement.	See BMP CRC4.
CRC2 Revised	Site Inspection Criteria	DPW	Develop site inspection criteria by 5/05 Standardized inspection form	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 and land development projects.	Continue to inspect all sites, review the inspection form and update as necessary. Develop a filing protocol for inspection forms and maintain a log of issues and corrective actions taken.
CRC3 Revised	Staff training re site inspections	DPW	Train all applicable staff by 5/06 Training program & record of staff trained	Staff were trained on site inspections.	Update training annually for all staff using existing curriculum, through joint training sessions or outside resources.
CRC4 Revised	Tighten regulatory controls Develop Requirements for Sites >1 acre	DPW/ConsCom	Review existing regs and propose updates as needed by 5/06 Spring 2008	The draft regulations to be implemented under the Stormwater Bylaw remained under consideration by the Planning Board.	Finalize and implement the draft regulations through the Planning Board.
CRC5 Revised	Maximum compliance Erosion & Sediment Control Compliance	DPW	Achieve overall compliance Record of inspections & follow-up actions	Erosion and sediment control issues were identified and addressed by the appropriate Town Department. DPW continued to evaluate best practices to track erosion and sediment control activities performed by the Town.	Continue to inspect and address erosion and sediment control issues and record corrective actions.

4a. Additions.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
CRC6	Construction Waste Mgt	DPW/Building Dept.	# of inspections in 2006	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.	Continued to coordinate inspections with BMPs CRC2 and CRC5 and record corrective actions.
Revised			Record of inspections & follow-up actions		
CRC7	Establish a Procedure for the Receipt of Information Submitted by the Public	SWSC/DPW	# of issues reported, record of enforcement actions	No calls were received related to construction sites. Typically the Conservation Commission receives calls regarding sites subject to the Wetlands Protection Act.	Continue to log calls and address construction site erosion issues.
Revised					

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 9	Planned Activities – Next Permit Term
RC1	ID BMPs	DPW/ConsCom /Planning Board	Review existing regs and draft new as needed by 12/05	The Stormwater Bylaw was adopted in May 2008. This Bylaw included criteria/requirements to address BMP design. The draft regulations to be implemented under the Stormwater Bylaw remained under consideration by the Planning Board.	Finalize and implement the draft regulations through the Planning Board.
Revised	Incorporate BMP Design Criteria		Fall 2007		
RC2	Acceptance of new regs/bylaws as needed	DPW/ConsCom /Planning Board	Codify new by 5/06	The Stormwater Bylaw (Article XLVII of the General Bylaws) was adopted in May 2008. The Town amended the Bylaw on October 25, to revise language related to exempt activities and enforcement.	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	The Stormwater Bylaw was adopted in May 2008. 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 9	Planned Activities – Next Permit Term
GH1 Revised	Survey facilities and existing practices, etc	DPW	Do self survey	Municipal industrial facilities were inspected for pollution prevention practices. Hazardous wastes and materials were contained and stored indoors to avoid stormwater contact. The Sewer Dept. inspected and maintained the o/w separator located within the DPW yard for the vehicle wash system and found it good operating condition.	Continue existing pollution prevention practices at municipal facilities and update based on the results of activities discussed under BMP GH6. Continue to utilize Contractor to remove catch basin cleanings and street sweepings from DPW stock yard. Continue to inspect and maintain oil/water separator using the inspection form.
GH2 Revised	Develop training manual	DPW	Create manual by 12/04	An inspection curriculum was previously developed and served as a reference for DPW staff. SPCC, SWPPP and Environment Operation Procedures manuals are in use. The SWPPP for the Wastewater Treatment Facility and the SPCC Plan for the DPW Facility were updated in April 2012.	Continue inspections in accordance with the updated plans.
GH3 Revised	Train Employees	DPW	Train ALL staff by 5/05 Incorporate new training topics	DPW staff viewed the video “After the Storm” on two occasions and discussed pollution prevention activities.	Update training program as necessary and continue training as part of pollution prevention and good housekeeping program.
GH4 Revised	Implement maintenance schedule	DPW	Implement veh and facilities maintenance schedule by 5/06	DPW vehicles were maintained to minimize fluid leaks.	Ensure maintenance schedules are followed to minimize potential stormwater impacts. Incorporate proper maintenance procedures into the employee training program (BMP GH3).

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
GH5	Evaluate Program	DPW	ID of facilities with controls in place by 5/07	DPW reviewed the need to update existing facility planning and training documents.	Re-evaluate municipal facilities and operations and develop/implement BMPs as needed. Continue to evaluate funding sources for program implementation.
Revised			Fall 2007		

6a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9	Planned Activities – Next Permit Term
GH6	Municipal Facility Plans	DPW	Compliance with SWPPP & SPCC Plans	The Town hired a consultant to update the SWPPP for the Wastewater Treatment Facility and the SPCC Plan for the DPW Facility. Updated plans for each facility were completed in April 2012. These plans assist with pollution prevention at these facilities.	Ensure compliance with the updated 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 9 (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.

*A draft phosphorus TMDL study is available for the Nashua River, which drains 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. Previous mapping efforts resulted in approximately 800 structures and 80 outfalls show on 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	(#)	0

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)	
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)	
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 %)	Unknown*
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 continued the use of Ice-Ban and salt without sand to improve the effectiveness of salt treatments without an increase in the salt application rate. This mixture reduces the financial and environmental impacts of sand application and removal (i.e., street sweeping & catch basin cleaning).		