5/14/14

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Municipality/Organization: **City of Amesbury**

EPA NPDES Permit Number: **MAR041177**

MassDEP Transmittal Number: **W-035560**

Annual Report Number & Reporting Period: **No. 11: May 1, 2013-April 30, 2014**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Robert Desmarais Title: Director of Public Works

Telephone #: (978) 388-8116 Email: rob@amesburyma.gov

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: Robert Desmarais

Title: Director of Public Works

Date: 4/25/14

Part II. Self-Assessment

The City of Amesbury 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 City 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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
1a	Publish information on voluntary yard waste program	City Engineer	Publish in newspaper various times	The City continued to publish information regarding the hours of operation, location, materials to be collected, etc. for the yard waste program. Yard waste is collected five times per year via curbside pickup. Amesbury also opened a composting site on South Hunt Road where residents may dump yard waste in an environmentally friendly manner.	The City will continue to advertise and conduct the yard waste collection program. Amesbury will continue to maintain the new composting site.
Revised			Advertise opportunities for yard waste disposal via the website and conventional print methods		
1b	Publish information about household hazardous waste program	City Engineer	Publish flyers and notices in paper and radio in the spring	The City published information regarding the household hazardous waste (HHW) disposal opportunities, dates, hours of operation, location, and materials to be collected on posters hung in public places, as well as in the Newburyport Daily News prior to the June 8, 2013 event. The collection event was also advertised on the City webpage as outlined in BMP 1d. This program helps to reduce illegal dumping of wastes in sensitive areas.	The City will continue to advertise and conduct its HHW disposal program, as well as advertise those available through outside organizations such as the Amesbury Lions Club. Explore alternative advertising methods to increase community participation.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
1c	Publish educational brochure	City Engineer	Coordinate with public awareness group and update annually	Educational stormwater posters were prepared and set up at City Hall for residents to view. Stormwater brochures were provided to residents for download on the City's website and for pickup at City Hall. Brochures included general info on stormwater topics, such as fertilizers, pesticides, vehicle washing, proper pet waste collection and disposal, yard waste composting, and disposal of HHW.	The City will continue to display educational material in public places and look for additional ways to improve public education and reach additional residents.
Revised					
1d	Post brochure on the city website	IS Dept.	Establish link and update annually	The City continued to host stormwater information on its website as outlined in BMP 1b. Information includes advertising HHW and universal waste disposal opportunities, and yard waste disposal opportunities, including composting.	Continue to periodically update the website with information on stormwater and provide information on upcoming public events.
Revised					

1a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
1e	Install storm drain markers and stenciling	City Engineer with Volunteers	Complete installation of markers on curbs and painted stencils	To date, 500 markers were installed on storm drains during previous permitting years to discourage illegal dumping to the MS4 system.	Maintain/replace markers and paint faded stencils as needed.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
1f	Install pet waste signs and bag dispensers	Dept. of Public Works/ City Engineer	Complete installation of pet waste signs and bag dispensers	The City has installed pet waste signs and bag dispensers at various park and trail head locations, including Tuxbury Pond Park Area, Lake Gardner Beach, Battis Farm, Woodsom Farm, the City Park, as well as along various walking trails.	Maintain dispensers and restock bags as needed. Look for additional locations to install pet waste bag dispensers as budget allows.
Revised			Install pet waste signs and bag dispensers at high-use areas		

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
2a	Voluntary yard waste disposal program	Dept. of Public Works	Conduct Annually April-November	The City conducts a voluntary yard waste program between April and November. Yard waste is collected five times per year via curbside pickup. As outlined in BMP 1a, Amesbury recently opened a composting site on South Hunt Road for vegetation disposal. This program helps to reduce illegal dumping of grass and leaves in waterways and wetland areas. Programs were advertized in a number of ways as outlined in BMP 1a.	The City will continue with the current yard waste collection program. Encourage residents to reuse materials at home for composting purposes or to use the new City composting site.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
2b	Conduct meetings regarding stormwater management	Dept of Public Works/ City Engineer	Conduct one meeting per year	The Amesbury DPW periodically meets with other departments and boards such as the Conservation Commission, Planning Board, etc. to discuss stormwater topics. Discussions include current and future construction projects within the city, as well as operations and maintenance of the MS4. The Amesbury Lakes and Waterways Commission also conducts monthly open meetings to discuss lake related issues such as stormwater impacts. Meetings are open to interested members of the public. The Lakes and Waterways Commission coordinates lake cleanup efforts such as trash removal, elimination of invasive species, etc. as funds are available. The commission also actively pursues funding opportunities for lake cleanup efforts.	Continue to hold meetings to discuss current and future stormwater projects. The Lakes and Waterways Commission will continue to hold open meetings throughout the year and conduct lake cleanups as resources allow.
Revised		Lakes and Waterways Commission	Conduct meetings as needed to coordinate on stormwater topics		

2a. Additions

No additions at this time.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
3a	Map stormwater drainage system and outfalls	City Engineer	3 year program using GPS equipment with sub-meter accuracy	The City has completed GPS location and mapping of 100% of City-owned outfalls during previous permitting years. All known outfalls have been recorded and incorporated into a GIS base map. No additional structures were mapped during Permit Year 11.	Continue to update existing drainage system mapping as new developments are constructed or as additional outfalls are located.
Revised			Record GPS coordinates and map all outfalls within 3 years		
3b	Visually inspect outfalls for dry weather flow	City Engineer	3 year program concurrent with mapping	All known outfalls were inspected for dry weather flows during mapping efforts conducted during previous permitting years, and a total of 312 outfalls have been inspected to date. Mapping was completed as part of BMP 3a and potential illicit discharges are addressed under BMPs 3c and 3d.	Continue with follow-up observations and inspections for outfalls where dry weather flows were identified.
Revised			Inspect all outfalls for dry weather flows within 3 years		
3c	Develop sampling and analysis program	City Engineer	3 year program based on results of outfall inspections	No outfalls were sampled during Permit Year 11. During previous years, 12 outfalls were sampled to determine illicit discharge sources. One illicit sewer connection was found and disconnected on Merrimac Street. During previous permitting years, Amesbury removed several sewer cross connections along Mill Street. Investigation and testing continued in Permit Year 11, however, elevated bacteria levels remain and the City plans to connect this portion of drain pipe to the sewer system during the summer of 2014.	All known outfalls with dry weather flows have been sampled to evaluate for potential illicit discharges. If additional dry weather flows are located or suspected illicit discharges identified, perform sampling and determine the source.
Revised	Evaluate dry weather flows for potential illicit discharges		Identify and remove any illicit discharges within 3 years		

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
3d	Develop a program to identify and locate illicit discharge connections	City Engineer	3 year program to test drains based on results of sampling and analysis	IDDE investigations have been completed for outfalls with dry weather flow that indicated potential illicit discharges. Additional illicit discharge investigations continued in the Mill Street neighborhood in response to the potential illicit discharge identified under BMP 3c.	Continue efforts in the Mill Street neighborhood to eliminate any illicit discharges. Continue to follow up on any additional sources of illicit discharges and work towards elimination.
Revised			Develop an IDDE program within 3 years		
3e	Periodically inspect outfalls	City Engineer	Inspect 25% of outfalls per year.	As outlined in BMP 3b, all outfalls were inspected by the end of Permit Year 3. Ongoing outfall inspection continues in response to resident complaints or flooding impacts. Known problematic outfalls are proactively inspected during routine maintenance procedures for potential problems to reduce the likelihood of flooding problems during large rainfall events or heavy snow melt.	Continue the current outfall inspection program.
Revised			Inspect outfalls for potential flooding impacts		
3f	Develop Stormwater Use Regulation prohibiting illicit discharges	City Engineer	Incorporate into comprehensive stormwater ordinance.	A draft Stormwater Management Ordinance addressing illicit discharges was developed and is under review by various City Departments. This was combined with BMPs 4a and 5a as a single document.	Continue to review and develop an Illicit Discharge ordinance to satisfy Phase II requirements.
Revised					

3a. Additions

No additions at this time.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
4a	Develop a comprehensive stormwater ordinance	Dept. of Public Works, City Engineer, other Depts.	Obtain approval from Mayor and Municipal Council.	A draft Stormwater Management Ordinance addressing erosion controls and post-construction stormwater controls was developed and is under review by various City Departments. This was combined with BMPs 3f and 5a as a single document.	Continue to review and develop a stormwater management ordinance. Adopt and enforce the ordinance through peer review and site inspections.
Revised					
4b	Reassess stormwater management plan	City Engineer	Perform every three years	Numerous Phase II programs and BMPs have been implemented over the past several years or are currently taking place. BMP progress is outlined throughout this report.	Perform an annual review of the stormwater program and look for possible improvement areas.
Revised					
4c	Require erosion and sediment control measure plan prior to construction on all projects	Planning Board, Conservation Commission, City Engineer	Conduct periodic site inspections and monitor and track violations through reports to the Conservation Commission.	The City Planning Board requires erosion and sedimentation control plans prior to construction. Plans are reviewed by City departments to ensure proposed BMPs are adequate. Site visits are conducted periodically by the appropriate City department (Conservation Commission, Planning Board, DPW, Engineer etc.) to assure the contractor is in compliance with the proposed plan and that erosion control measures are in place.	Continue to review erosion and sedimentation control plans and perform periodic site inspections as necessary. Follow up on any required actions.
Revised					

4a. Additions

No additions at this time.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
5a	Develop standards for regulating stormwater controls for all new and redevelopment projects and inspect controls	Planning Board, Conservation Commission, City Engineer	Incorporate into comprehensive stormwater ordinance.	A draft Stormwater Management Ordinance addressing erosion controls and post-construction stormwater controls was developed and reviewed by various City Departments. This was combined with BMPs 3f and 4a as a single document.	Continue to review and develop a stormwater management ordinance. Adopt and enforce the ordinance through peer review and site inspections.
Revised					

5a. Additions

No additions at this time.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
6a	Street sweeping	Department of Public Works	Continue program of sweeping twice annually. Track volume of material collected by area. Sweep in late spring and fall with additional sweeping during severe winters.	All streets are swept in the City at least once annually. Higher priority areas, such as those traveled more frequently or subject to heavier sediment accumulation are swept more frequently as needed. All street sweeping materials are properly disposed of as regulated by MassDEP.	Street sweeping efforts will be continued and efforts will be made to track the amount of debris collected during the sweeping in order to prioritize areas for additional sweeping.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
6b	Deicing	Department of Public Works	Continue program of using Ice Ban to enhance melting	Ice Ban was not used to enhance melting during Permit Year 11.	Upon further evaluation, the City does not intend to use Ice Ban in the future.
Revised					
6c	Develop Spill Prevention Control Plan	Department of Public Works	Implement Plan and train employees within one year	A database for all facilities in the City that require an SPCC plan was completed during previous permit years to help promote pollution prevention throughout the City. Facilities include the DPW Yard and Wastewater Treatment Facility. SPCC plans are maintained and updated as necessary for each facility.	Maintain and update the database with additional facilities as required. Provide facilities with information on regulatory requirements and additional information such as fact sheets.
Revised	Develop Spill Prevention Control Plan Database		Database of facilities throughout the City that require SPCC Plan.		
6d	Catch basin cleaning	Department of Public Works	Continue program of catch basin cleaning twice annually. Track volume of material removed by area.	Catch basins are cleaned at least every two years, with high priority catch basins cleaned more frequently. Approximately 2,600 catch basins were cleaned during Permit Year 11, with approximately 500 basins subject to heavy accumulation cleaned twice. Catch basins are replaced as required, typically with deep sumps for more sediment storage and pretreatment.	Continue to clean catch basins as funding allows. Also clean other BMPs such as Vortechnics units in residential areas and baffle tanks in residential and commercial areas as resources are available.
Revised			Limited funding has reduced the City's catch basin cleaning to once annually.		
6e	Trash removal and recycling	Department of Public Works	Continue program of trash removal weekly and curbside recycling biweekly.	The curbside trash removal and recycling program was conducted and advertised as outlined in BMP 1b.	Continue with current disposal program. Explore ways to increase participation and expand advertising efforts in conjunction with BMP 1b.
Revised					
6f	Yard waste disposal	Department of Public Works	Continue voluntary program for resident drop-off of yard waste April-November.	The yard waste collection program was conducted and advertised as outlined in BMPs 1a and 2b.	Continue holding yard waste drop-off events. Explore ways to increase participation and expand advertising efforts in conjunction with BMP 1a.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
6g	Household hazardous waste program	Department of Public Works	Continue annual program of conducting a collection day for household hazardous waste	Amesbury held a HHW day on June 8, 2013 for Permit Year 11. The event was advertised as outlined in BMP 1b. The Lions Club also held an event on September 21, 2013, where residents were allowed to dispose of HHW and universal wastes for a small fee.	Continue to hold a HHW disposal day at least annually. Advertise the event through available media such as television, newspaper and internet.
Revised					
6h	Develop storm drain flushing program	Department of Public Works	Flushing reports of pipe sections completed.	Pipe sections were flushed as needed, generally in response to flooding complaints received from residents or concerns raised during routine inspection procedures. Sections are flushed to remove excess sediment and reduce potential flooding problems.	Continue the current storm drain pipe flushing program.
Revised					
6i	Television inspection of storm drains	Department of Public Works	Inspection reports of pipe sections completed.	No additional pipe sections were TV inspected during Permit Year 11.	Continue TV inspections as required, pending budget and personnel allowances.
Revised					
6j	Require Spill Control Plans from all non-residential establishments	Department of Public Works	Inspection reports and plans.	A database for all facilities in the City that require an SPCC plan was completed during previous permit years to help promote pollution prevention throughout the City as outlined in BMP 6c. Facilities include the DPW Yard and Wastewater Treatment Facility. SPCC plans are maintained and updated as necessary for each facility.	Maintain and update the database with additional facilities as required. Provide facilities with information on regulatory requirements and additional information such as fact sheets.
Revised	Require Spill Control Plans from all applicable establishments				

6a. Additions

No additions at this time.

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Period
7a					
Revised					

7a. Additions

No additions at this time.

7b. WLA Assessment

MassDEP has prepared the Final 2012 Integrated List of Waters. The following waterbodies are listed as Category 5, "Waters Requiring a TMDL":

1. Lake Attitash: segment ID MA84002; impaired for Mercury in Fish Tissue
2. Back River: segment ID MA84A-16; impaired for Escherichia coli, Sedimentation/Siltation, Turbidity
3. Powwow River: segment ID MA84A-08; impaired for Escherichia coli
4. Powwow River: segment ID MA84A-25; impaired for Escherichia coli
5. Powwow River: segment ID MA84A-28; impaired for Fecal Coliform, Total Suspended Solids (TSS), Turbidity
6. Unnamed Tributary to Powwow River: segment ID MA84A-30; impaired for Escherichia coli
7. Merrimack River: segment ID MA84A-05; impaired for Enterococcus, PCB in fish tissue
8. Merrimack River: segment ID MA84A-06; impaired for Enterococcus, Fecal Coliform , PCB in fish tissue

Once TMDLs are developed for any of the above waterbodies, Section 7 of the annual reports will be updated to reflect changes associated with each TMDL. Water quality concerns associated with 303d waters are also addressed through the implementation of BMPs under the six minimum measures for Phase II. The approach for addressing impaired waters will be updated based on the new permit.

Part IV. Summary of Information Collected and Analyzed

Locations and physical descriptions of approximately 312 outfalls have been gathered since Permit Year 1. Copies of all educational materials and memos distributed have been kept on file. Meeting memos and phone logs have also been kept on file. To date, 14 outfalls have been sampled and a total of 8 dry weather flow sources have been investigated.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	**No**
Annual program budget/expenditures	($)	

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	**1**
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

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	(#)	
System-Wide mapping complete	(%)	**100%**
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	**100**
Outfalls inspected/screened	(# or %)	**312**
Illicit discharges identified	(#)	**1 since Permit Year 1**
Illicit connections removed	(#) (est. gpd)	**1 since Permit Year 1**
% of population on sewer	(%)	**55%**
% of population on septic systems	(%)	**45%**

Construction

Number of construction starts (>1-acre)	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	
Fines collected	(# and $)	
Complaints/concerns received from public	(#)	

Post-Development Stormwater Management

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

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	**Once every 2 years**
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	**Once every 2 years**
Total number of structures cleaned	(#)	**2,600**
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		

Cost of screenings disposal	($)	
Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	**1/year**
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	**1/year**
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

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

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	**0**
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	**Yes**
Storage shed(s) in design or under construction	(y/n)	**No**