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**Municipality/Organization:** Town of Essex

**EPA NPDES Permit Number:** MA041239

**MaDEP Transmittal Number:** W-035216

**Annual Report Number  
& Reporting Period:** No. 2: April 05 - April 06

## NPDES PII Small MS4 General Permit Annual Report

### Part I. General Information

**Contact Person:** Erik G Mansfield **Title:** Wastewater Technician

**Telephone #:** (978)-768-6262 **Email:** emansfield@essexma.org

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:** Erik G Mansfield

**Title:** Wastewater Technician

**Date:** 4/28/06

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

**The Town has been continuing our stormwater sampling project and has been working with the BOH to eliminate illicit discharges to our stormwater system. I have written an illicit discharge by-law that voted on and passed at the May 2005 Town meeting. Our sewer project is nearing completion, we have been uncovering and blocking non-permitted drain lines. Several outfall locations have been identified as being in need of repair and we are working to fund these jobs. I have some funds available for mailings and we have set up a flyer board at the Water Filtration Plant. I have had no progress on the elementary school education as I have had little time to deal with this issue this year. As in past years funding is a concern as well as limited manpower. We are doing our best to implement new projects and hopefully when we have completed our sewer system in July 2006 we can put more man power toward this project.**

**Part III. Summary of Minimum Control Measures**

**1. Public Education and Outreach**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)</b>	<b>Planned Activities – Permit Year 4</b>
SX1 Revised	Hazardous Waste Day	DPW Paul Goodwin	See Attachment 1	HHWD is scheduled to be held on April 22, 2006	We are planning to continue with HHWD around the same time.
SX2 Revised	Water Conservation	Water Dept. Paul Goodwin	See Attachment 1	Set up a flyer board at the Water Filtration Plant with conservation information.	Mailings.
SX3 Revised	Lawn & Garden	Wastewater Erik Mansfield	See Attachment 1	Set up a flyer board at the Water Filtration Plant with conservation information.	Mailings.
SX4 Revised	Classroom Education	Wastewater Erik Mansfield	See Attachment 1	No action taken.	Work with Elementary school.
Revised					
Revised					

**1a. Additions**


**2. Public Involvement and Participation**

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
SX5 Revised	Drain Stencils	Wastewater Erik Mansfield	See Attachment 1	Continue Stencil program.	Continue with program.
SX6 Revised	Elementary School Projects	Wastewater Erik Mansfield	See Attachment 1	No action taken.	Will talk with Principal about appropriate grade.
SX7 Revised	Hazardous Waste Day	DPW Paul Goodwin	See Attachment 1	Tire collection and a battery collection.	See what else is out there.
Revised					
Revised					
Revised					

**2a. Additions**


### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
SX8 Revised	Identify Failing Septic Systems	Board of Health Elaine Wozney	See Attachment 1	Notices were sent to any owner of a failed septic system to hook into the Town's sewer system.	Continue to identify.
SX9 Revised	Drain Connection Permit	DPW Paul Goodwin	See Attachment 1	New by-law passed at May 2005 Town meeting.	Anticipate a few permits due to disconnecting of drain lines during sewer project.
SX10 Revised	Stormwater Sampling	Wastewater Erik Mansfield	See Attachment 1	Continued with current program.	Continued with current program.
SX11 Revised	Outfall Inspections	Wastewater Erik Mansfield	See Attachment 1	Inspected a few basins after cleaning. Found that most met expectations.	Do a Fall inspection to see if twice a year is required.
SX24 Revised	Illicit Discharge Enforcement	Wastewater Erik Mansfield	See Attachment 2	By-law passed at May 2005 Town meeting.	Enforcement of new by-law.

### 3a. Additions


#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
SX12 Revised	Inspection and Maintenance	Conservation Commission	See Attachment 1	ConCom has been very good about inspections.	Continue with current practices.
SX13 Revised	Construction Entrances	DPW Paul Goodwin	See Attachment 1	No action taken.	Continue to be a nuisance to contractors about keeping roadways clean.
SX14 Revised	Silt Fence	Conservation Commission	See Attachment 1	ConCom has been very good about silt-fence inspections.	Continue with current practices.
SX25 Revised	Enforcement	Conservation Commission	See Attachment 2	No progress at this time.	Talk to ConCom about By-Law.
Revised					
Revised					

#### 4a. Additions


**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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
SX15 Revised	Alternative Pavers	Planning Board	See Attachment 1	Planning board has made this a suggestion.	Continue with current practices.
SX16 Revised	Catch Basins	Wastewater Erik Mansfield	See Attachment 1	No action taken.	Set up meetings with private road associations to work on details.
SX17 Revised	Street Curbing	Planning Board	See Attachment 1	Planning board has made this a suggestion.	Continue with current practices.
SX26 Revised	Enforcement	Conservation Commission	See Attachment 2	No action taken.	Work with ConCom to come up with a By-Law.
Revised					
Revised					

**5a. Additions**


### 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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
SX18 Revised	Truck Wash Bay	DPW Paul Goodwin	See Attachment 1	New garage has been bid and looking at fall of 2006 to begin construction.	Construction of new highway garage.
SX19 Revised	Street Cleaning	DPW Paul Goodwin	See Attachment 1	We feel that at this time our street sweeping is adequate.	Continue to review.
SX20 Revised	Catch Basin Cleaning	DPW Paul Goodwin	See Attachment 1	Had the catch basins cleaned in the fall do to all of the construction around Town.	Do a Fall inspection to see if twice a year is required.
SX21 Revised	Drain Repair / Replacement	DPW Paul Goodwin	See Attachment 1	Found a few outfalls that need repair. A few drains were also identified as needing repair. Two catch basins were repaired.	Work on funding repairs and identifying more.
SX22 Revised	Salt Storage	DPW Paul Goodwin	See Attachment 1	Maintain good housekeeping practices.	Maintain good housekeeping practices.

### 6a. Additions




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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
SX23 Revised	Public Sewer System	Wastewater Erik Mansfield	See Attachment 1	We are currently about 85% complete on our sewer project.	Projected completion July 2006.
SX27 Revised	Outfall Map	Wastewater Erik Mansfield	See Attachment 2	Maintain and re-evaluate current map.	Maintain and re-evaluate current map.
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions


7b. WLA Assessment

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

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

**Programmatic**

Stormwater management position created/staffed	(y/n)	
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	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

**Legal/Regulatory**

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

**Mapping and Illicit Discharges**

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

**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)
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)
Total number of structures cleaned	(#)
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)
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Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)
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 <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand
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)
Storage shed(s) in design or under construction	(y/n)

# **ATTACHMENT 1**

## **MEASURABLE GOALS**

- SX1** – Distribute flyers with information about what hazardous waste day is about and what it hopes to accomplish. Post banners around town to inform the public of dates and locations.
- SX2** – Send out flyers with water bills informing the public of the benefits of water conservation.
- SX3** – Distribute flyers to home owners and business owners on the effects of fertilizers and chemical lawn and garden products.
- SX4** – Work with Elementary School to develop a classroom education program.
- SX5** – Work with local girl and boy scouts on a drain stenciling program.
- SX6** – Work with the Elementary School with poster drawing and getting the children out into Town to see where the drains start and where they end.
- SX7** – Add more programs to the current hazardous waste day to increase amounts of materials.
- SX8** – Work with Board of Health to make sure we are made aware of all failing septic systems.
- SX9** – Continue to issue permits for all connections to the Towns storm drain systems.
- SX10** – Continue with the current storm water sampling program implemented in 1996.
- SX11** – Periodic inspections of outfalls to determine if street sweeping and catch basin cleaning is adequate.
- SX12** – Work with Conservation Commission to ensure construction site inspections are being performed and that the contractors are maintaining all barriers.
- SX13** – Visually inspect construction site entrances and exits to ensure streets are clean.
- SX14** – Work with Conservation Commission to ensure correct and proper placement of silt fences.
- SX15** – Work with the Planning Board to look at alternative pavers as an option for developments.
- SX16** – Visually inspect catch basins on private roads and work with homeowners to develop a plan that addresses cleaning and maintenance.
- SX17** – Work with Planning Board to reduce the amount of street curbing used in new developments.
- SX18** – Build a truck wash bay for cleaning Town vehicles. The Town has already appropriated the funds for this project.
- SX19** – Look at current street sweeping schedule and determine if it is adequate.
- SX20** – Look at current cleaning schedule and inspect basins in between cleanings to determine if it is adequate.
- SX21** – Repair broken drain lines and catch basins that may have collapsed.
- SX22** – Build a new salt storage facility. The Town has already appropriated the funds for this project.
- SX23** – Install a public sewer system. The Town of Essex is currently in the process of installing a public sewer system.

## **ATTACHMENT 2**

### **MEASURABLE GOALS**

**SX24** – Created a Town wide Bylaw allowing fines for illicit discharges to the storm drain system. Work with Conservation Commission and Board of Health to enforce Bylaw.

**SX25** – Create a Town wide Bylaw allowing fines for construction site runoff violations. Work with Conservation Commission and Planning Board to create and enforce Bylaw outside of the wetlands protection area.

**SX26** – Create a Town wide Bylaw allowing fines for post construction site runoff violations. Work with Conservation Commission and Planning Board to create and enforce Bylaw outside of the wetlands protection area.

**SX27** – Maintain current outfall map and update when needed.

