

Municipality/Organization: Manchester-by-the-Sea, MA
EPA NPDES Permit Number: MAR041207
MassDEP Transmittal Number: W-036274
Annual Report Number & Reporting Period: Year 8
April 1, 2010 – March 31, 2011


**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2011)**

Part I. General Information

Contact Person: Steven T. Kenney **Title:** Director 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: Steven T. Kenney
Title: Director of Public Works
Date: 3/30/11

Part II. Self-Assessment

From April 1, 2010 – March 31, 2011 the Town of Manchester-by-the-Sea continued to make progress implementing BMPs and meeting requirements of EPA's 2003 General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The BMPs selected continue to be appropriate for the Town.

Town Staff from the DPW, Conservation Commission, Building Department, Board of Health, and Planning Board conduct stormwater management activities. The Town has an active Coastal Stream Team, which is a group of local citizens who focus on projects designed to maintain and improve water cleanliness, quality, and to preserve coastal habitats. The Stream Team conducts numerous outreach and education activities throughout the year.

This year, the Town applied for a grant from the Massachusetts Bays Program to restore Sawmill Brook, which included a stormwater management component.

The Town takes numerous efforts to prevent pollution and education its residents about pollution prevention measures. The Town stores winter de-icing materials under cover. The Town participates in the Mercury Recovery Program and has brochures available in Town Hall to educate the citizens about proper mercury disposal. The Town, through the Board of Health, has an aggressive septic system inspection program. In addition, all sump pump connections are required to be inspected by the DPW during real estate transactions.

The Town is also working to add stormwater management information to the DPW website, to further educate the public about the impact of stormwater on waterbodies, and to identify steps and activities the public can take to reduce pollutants in stormwater runoff.

The DPW is coordinating with high school students to stencil catch basins with no dumping information and is working with local boy scouts to conduct a detailed outfall inventory of all outfalls previously located.

Notes on Permit Year 8 Annual Report:

- In the Permit Year 5 Annual Report, the Town assigned new BMP ID#s, to better tie the BMP to the MCM (i.e., BMP 1 became BMP 1.1, BMP 2 became BMP 1.2, and BMP 3 became BMP 2.2, etc). All BMPs identified in the Notice of Intent continue to be implemented.
- In Permit Year 6 Annual Report, the Town added a BMP (#6.1) to include a stormwater system and catch basin inspection program.
- In Permit Year 7 Annual Report, the Town added BMPs #1.3, 1.4 and 6.5.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
1.1	Water Conservation Practice Brochures	DPW	Number of brochures mailed	Approximately 2,000 water conservation brochures were mailed water with water bills; each bill includes a brochure.	Continue to include brochures with water bills as budget allows.
Revised			Revised Year 1: Brochure distribution (goal of over 1,700)		
1.2	Hold Hazardous Waste Collection	Board of Health	Conduct annual event	Board of Health held annual household hazardous waste day in April 2010.	Continue annual event as budget allows.
Revised				Recycling information continued to be available on Town Website	Continue to make recycling information available on website as necessary.
1.3	Stormwater Brochures at Town Hall	DPW/ Conservation/ Stream Team	Make stormwater-related brochures available at Town Hall	Town has three stormwater brochures available in Town Hall: “The Importance of Streamside Buffers”, “Make the Stormwater Connection” and “Pet Waste and Bathing Beaches – Guidelines for Pet Owners”	Continue to make brochures available as budget allows.

1.4	Animal Control Bylaw (Town's General Bylaws Article X Section 28)	Police/ Board of Health	Enforce Animal Control Bylaw	<p>Town Bylaw prohibits disposal of dog waste on beaches, sidewalks, streets, parks, in town storm drains and on public beaches. The Police continued to enforce the Animal Control Bylaw, including patrolling beaches, parks, recreational areas and cemeteries and monitoring the 'dog waste stations.'</p> <p>The Board of Health also promotes compliance with and educates residents and visitors about this bylaw as well. Town maintains signage on streets entering Manchester-by-the-Sea alerting visitors of the bylaw.</p>	As needed, and as budget allows, Police and Board of Health will continue to promote and enforce bylaw.
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1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
2.1 Revised	Stream Cleaning	DPW/ Conservation Commission	Annual Project	<p>The Town has undertaken numerous stream cleaning projects.</p> <ul style="list-style-type: none"> • A portion of Millets Brook was cleaned in August 2003. • A portion of Sawmill Brook (from Mill Street south to Essex Country Club) was cleaned in December 2005. • Millets Brook (from Millets Lane to Rote 128) was cleaned in January 2007. • In more recent years, DPW and Conservation Commission worked together on a stream cleaning project in the Saw Mill Brook. • This year, budget prohibited cleaning activities. However, Town applied for a grant from the Massachusetts Bays Program to restore Sawmill Brook, which included a stormwater management component. 	As budget allows, continue annual stream cleanings as needed.

2.2	Stakeholder Meetings	Manchester Coastal Stream Team/ Conservation Commission	Number of meetings	The Manchester Coastal Stream Team met once a month for most of the year to discuss environmental issues that affect water bodies in Manchester-by-the-Sea and to plan corrective measures to address identified issues. All projects include public participation and involvement.	Continue monthly meetings, as possible.
Revised			Revised in Permit Year 1: Conservation Commission Meetings (Goal – 16 times per year) Stream Team Meetings (Goal – 9 times per year)	The Conservation Commission met twice a month (second and fourth Tuesday). Additional meetings were scheduled as needed. Abutters and general public were invited to consider drainage and stormwater manage issues as related to the Wetlands Protection Act and related state and local laws. All public involvement activities complied with state public notice requirements at MGL Chapter 39 Section 23B and local public notice requirements.	

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
3.1	Map of Storm Drains	Public works	Complete by June 30, 2006	GIS map of storm sewer system (outfalls, catch basins, and other drainage structures) is complete. Connectivity, where know, is included on map.	BMP complete; measurable goal met. Update map as needed.
Revised					
3.2	Illicit Discharge Policy/Regs	DPW/ Conservation Commission/ Planning Board/ Building Inspector	Complete by June 30, 2007	IDDE Bylaw was drafted.	Put Bylaw on Warrant for Town Meeting
Revised			Revised in Permit Year 4: Complete implementation by May 31, 2008		

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
4.1	Develop and Implement Construction Runoff Policy/Regulations regulating erosion and sediment control	DPW/ Conservation Commission/ Planning Board/ Building Inspector	Complete by June 30, 2007	“Stormwater Management Special Permit” added to Town Zoning By-law in April 4, 2007. Regulations adopted by Planning Board. Planning Board continues to implement Bylaw and regulations.	BMP complete and measurable goal achieved. Continue to Implement bylaw and regulations
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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 9
5.1	Develop and implement Post Construction Policy	DPW/ Conservation Commission/ Planning Board/ Building Inspector	Complete by June 30, 2007 Implement bylaws	“Stormwater Management Special Permit” added to Town Zoning By-law in April 4, 2007. Planning Board adopted regulations.	BMP complete and measurable goal achieved. Continue to implement bylaw and regulations
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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – (Permit Year 8)
6.1	Stormwater System and Catch Basin Inspection Program	DPW	Annual Inspections	DPW Inspected catch basins and, based on inspection, cleaned as necessary.	Continue annual inspections and as-needed cleanings.
Revised					
6.2	Septic system controls	Board of Health	Number of new systems or repairs	As septic systems are inspected, failing systems were upgraded as needed. The Town continued to use tracking system for pump outs.	Continue to monitor septic systems as needed.
Revised					
6.3	Sweep all streets by June 1	DPW	Completed on time	The DPW swept streets by June 1, 2011.	Continue to sweep streets once per year, as budget allows. Modify program depending on new permit requirements.
Revised			Revised Year 1: Complete by June 1		
6.4	May through September, Minimum of biweekly sweeping of main streets	DPW	Number of sweepings complete	The DPW swept main streets regularly throughout the summer season (May through September).	Continue to sweep main streets as needed and as budget allows. Modify program depending on new permit requirements.
Revised			Revised Year 1: Goal: Minimum of 10 bi-weekly sweepings Revised Year 5: Sweep as necessary		
6.5	Employee Training	Conservation Commission/ Fire Department/ DPW	Train staff annually	Town continues to incorporate stormwater training into annual trainings of Conservation Commission, the Fire Department, and the DPW. Training includes understanding how to recognize illicit discharges.	Continue annual stormwater trainings.
Revised					

6a. Additions

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

Not applicable. None of Manchester-by-the-Sea’s receiving waters have approved TMDL reports at this time. A Draft Pathogen TMDL for the North Coastal Watershed has been developed, but is not yet final.

Part IV. Summary of Information Collected and Analyzed

- Salem Sound Coastwatch’s Clean Beaches and Streams sampling results are available at their website.
<http://www.salemsound.org/CB&S.html>
- Town’s Board of Health maintains records of weekly sampling results and beach closings for the Town’s eight beaches. The Massachusetts Department of Public Health also presents sampling results on their website:
http://mass.digitalhealthdepartment.com/public_21/index.cfm

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2010 through March 31, 2011)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General fund

Education, Involvement, and Training

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

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	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

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

	(Preferred Units)	Response
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 (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

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)	
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Basin Cleaning Costs		
<ul style="list-style-type: none"> Annual budget/expenditure (labor & equipment)** 	(\$)	
<ul style="list-style-type: none"> Hourly or per basin contract rate ** 	(\$/hr or \$ per basin)	
<ul style="list-style-type: none"> Disposal cost** 	(\$)	
Cleaning Equipment		
<ul style="list-style-type: none"> Clam shell truck(s) owned/leased 	(#)	
<ul style="list-style-type: none"> Vacuum truck(s) owned/leased 	(#)	
<ul style="list-style-type: none"> Vacuum trucks specified in contracts 	(y/n)	
<ul style="list-style-type: none"> % Structures cleaned with clam shells ** 	(%)	
<ul style="list-style-type: none"> % Structures cleaned with vacor ** 	(%)	

(Preferred Units) Response

Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	>1
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	100%
▪ Herbicides	(lbs. or %)	100%
▪ Pesticides	(lbs. or %)	100%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

(Preferred Units) Response

Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	