

JUN 5 2009

**Municipality/Organization:** Manchester-by-the-Sea, MA

**EPA NPDES Permit Number:** MAR041207

**MaDEP Transmittal Number:** X228515

**Annual Report Number  
& Reporting Period:** MAR041207 2009

P

## NPDES PII Small MS4 General Permit

### Annual Report Years 5 and 6

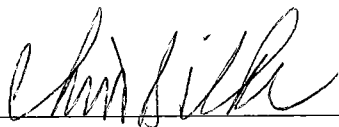
#### Part I. General Information

**Contact Person:** Steven T. Kenney, P.E. **Title:** Director of Public Works

**Telephone #:** 978-526-1242 **Email:** Kenneys@manchester.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:** 

**Printed Name:** Christopher M. Silke, P.E.

**Title:** Project Manager

**Date:** June 1, 2009



Enter your transmittal number

X228515

Transmittal Number

Your unique Transmittal Number can be accessed online: http://mass.gov/dep/service/online/trasmfrm.shtml or call MassDEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

Massachusetts Department of Environmental Protection
Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. Copy 2 must accompany your fee payment. Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

\* Note: For BWSC Permits, enter the LSP.

A. Permit Information

BRP WM07

Permit Renewal/Plan Modification

1. Permit Code: 7 or 8 character code from permit instructions

2. Name of Permit Category

Non-Industrial

3. Type of Project or Activity

B. Applicant Information - Firm or Individual

Town of Manchester-by-the-Sea

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

Kenney

Steven

T.

2. Last Name of Individual

3. First Name of Individual

4. MI

Town Hall, 10 Central Street

5. Street Address

Manchester-by-the-Sea

MA

01944

978-526-4612

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Steven T. Kenney

11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Manchester-by-the-Sea Wastewater Treatment Plant

1. Name of Facility, Site Or Individual

12 Church Street

2. Street Address

Manchester-by-the-Sea

MA

01944

978-526-4612

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)\*

Wright-Pierce

1. Name of Firm Or Individual

200 Brickstone Square, Suite 505

2. Address

Andover

MA

01810

978-470-0666

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Christopher M. Silke, P.E.

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

- 1. Is this project subject to MEPA review? [ ] yes [x] no
If yes, enter the project's EOE A file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

Special Provisions:

- 1. [x] Fee Exempt (city, town or municipal housing authority)(state agency if fee is \$100 or less). There are no fee exemptions for BWSC permits, regardless of applicant status.
2. [ ] Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. [ ] Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. [ ] Homeowner (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date

**NATIONAL POLLUTANT DISCHARGE  
ELIMINATION SYSTEM**

**Phase II Stormwater Management Plan  
Annual Report – Years 5 and 6**

**NPDES MS4 – MAR041207**

**for**

**Manchester by the Sea, Massachusetts**

**May 2009**



Enter your transmittal number

X228515

Transmittal Number

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5. Street Address

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01944

978-526-4612

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Steven T. Kenney

11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Manchester-by-the-Sea Wastewater Treatment Plant

1. Name of Facility, Site Or Individual

12 Church Street

2. Street Address

Manchester-by-the-Sea

MA

01944

978-526-4612

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)\*

Wright-Pierce

1. Name of Firm Or Individual

200 Brickstone Square, Suite 505

2. Address

Andover

MA

01810

978-470-0666

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Christopher M. Silke, P.E.

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Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
 PHASE II STORMWATER MANAGEMENT PLAN  
 2008 ANNUAL REPORT – YEAR 5**

**TABLE OF CONTENTS**

<b>SECTION</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1	INTRODUCTION AND BACKGROUND	
	1.1 Introduction and Background .....	1
2	SELF-ASSESSMENT REVIEW OF COMPLIANCE WITH THE PERMIT CONDITIONS	
	2.1 Self-Assessment Review of Compliance with the Permit Conditions	3
3	ASSESSMENT OF THE APPROPRIATENESS OF THE SELECTED BMPS	
	3.1 Assessment of the Appropriateness of the Selected BMPS.....	4
4	SUMMARY OF MINIMUM CONTROL MEASURES	
	4.1 Summary of Minimum Control Measures .....	5
	4.2 Public Education and Outreach.....	5
	4.3 Public Participation and Involvement.....	5
	4.4 Illicit Discharge Detection and Elimination .....	7
	4.4.1 Mapping .....	7
	4.4.2 Regulatory Mechanism .....	7
	4.4.3 Illicit Discharge Detection and Elimination Plan .....	7
	4.5 Construction Site Runoff Control Measures.....	7
	4.5.1 Regulatory Mechanism .....	7
	4.6 Post-Construction Runoff Control Measures.....	8
	4.6.1 Regulatory Mechanism .....	8
	4.7 Pollution Prevention/Good Housekeeping.....	8
	4.7.1 Employee Training.....	8
	4.7.2 Stormwater System Operation and Maintenance.....	8
	4.7.3 Municipal Operations.....	8

**APPENDICES**

A	MS4 Area within Manchester-by-the-Sea
B	NPDES Stormwater General Permit Notice of Intent (NOI)
C	NPDES Phase II Stormwater Management Plan, Year 4 Annual Report
D	Hydrologic Study Summary and Conclusion by Metcalf and Eddy, February 2008
E	Office of the Attorney General's Draft Stormwater Bylaws
F	Stormwater Management Provisions of the Manchester-by-the-Sea Zoning Bylaw

## LIST OF TABLES

<b>TABLE</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1	SWMP UPDATES AND COMMENTS ON APPROPRIATENESS	4
2	YEARS 5 AND 6 ANNUAL EVALUATION OF MINIMUM CONTROL MEASURES .....	6

# SECTION 1

## INTRODUCTION AND BACKGROUND

### 1.1 INTRODUCTION AND BACKGROUND

In 1990, The United States Environmental Protection Agency (EPA) began implementing a stormwater management program under the National Pollutant Discharge Elimination System (NPDES). This program, known as Phase I of the NPDES stormwater program, was intended to reduce pollution in stormwater discharges for large urban areas with populations of 100,000 or greater.

On December 8, 1999, the Phase II Rule of the NPDES stormwater program was published to address Municipal Separate Storm Sewer Systems (MS4s) within urban areas of populations less than 100,000 that were not addressed under the Phase I program. Objectives of the Phase II rule are for the MS4s to develop, implement and enforce a storm water program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. In order for an MS4 to meet these objectives, EPA has defined the following six “minimum control measures” that are to be addressed:

1. Public Education and Outreach
2. Public Participation and Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control Measures
5. Post-Construction Runoff Control Measures
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The intent is for MS4s to address these six minimum control measures by identifying and applying the appropriate Best Management Practices (BMPs) that apply for their community.

On May 1, 2003 the EPA issued the General Permit for Stormwater Discharges from MS4s. A portion of the Town of Manchester-by-the-Sea is defined as an MS4, and an outline of the designated area is included in Appendix A. The general permit requires that the stormwater program for each MS4 submit an annual evaluation. The Town of Manchester-by-the-Sea filed a Notice of Intent (NOI) for the NDPEs Stormwater General Permit on March 10, 2003. The NOI includes a description of the system and a stormwater management plan for each specific measurable goal. A copy of the NOI is included in Appendix B.

The following report contains information regarding the activities on the stormwater program for the previous Stormwater Years 5 and 6. The report contains the information required in the general permit as follows: (a) Self-Assessment Review of Compliance with the Permit Conditions; (b) Assessment of the Appropriateness of the selected BMPs; (c) Assessment of the Program towards Achieving the Measurable Goals; (d) Summary of the Results of Any Information that has been Collected and Analyzed; (e) Discussion of Activities for the Next Reporting Cycle; (f) Discussion of any Changes in Identified BMPs or Measurable Goals; and (g) Reference any Reliance on another Entity for Achieving any Measurable Goal.



## **SECTION 2**

### **SELF-ASSESSMENT REVIEW OF COMPLIANCE WITH THE PERMIT CONDITIONS**

#### **2.1 SELF-ASSESSMENT REVIEW OF COMPLIANCE WITH THE PERMIT CONDITIONS**

The Town of Manchester-by-the-Sea filed a National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Management Plan in May 2003. In November 2003, the EPA sent a letter to the town stating that the stormwater program was administratively complete and in compliance with the conditions of the General Permit. The General Permit maintains that the applicant file annual compliance reports. Annual reports were filed for the Town of Manchester-by-the-Sea for Years 1 through 4, according to the requirements of the General Permit. An annual report was filed for Year 4 (May 2006 - May 2007). A copy of the Year 4 annual report is included in Appendix C.

## SECTION 3

### ASSESSMENT OF THE APPROPRIATENESS OF THE SELECTED BMPS

#### 3.1 ASSESSMENT OF THE APPROPRIATENESS OF THE SELECTED BMPS

The Best Management Practices (BMPs) selected for the stormwater program were appropriate for the Town of Manchester-by-the-Sea. These BMPs are presented in Section 4.0. The Town made a few updates to their original Stormwater Management Plan (SWMP). Table 1 details any revisions to the SWMP or comments on the BMP appropriateness.

TABLE 1  
SWMP UPDATES AND COMMENTS ON APPROPRIATENESS

BMP ID NUMBER	BMP	BMP DESCRIPTION	COMMENTS ON APPROPRIATENESS
6.1	Public Involvement and Participation	Stormwater system and catch basin inspection program	An additional measurable goal was added to include a stormwater system and catch basin inspection program.
6.4	Pollution Prevention and Good Housekeeping for Municipal Operations	Street sweeping	The measurable goal was to sweep main roads bi-weekly a minimum of 10 occurrences. The measurable goal was changed from a specific number of cleanings to cleanings as necessary.

## **SECTION 4**

### **SUMMARY OF MINIMUM CONTROL MEASURES**

#### **4.1 SUMMARY OF MINIMUM CONTROL MEASURES**

In order to meet the six control measures required by the EPA, the Town created a Stormwater Management Plan (SWMP) which details stormwater best management practices (BMPs) and measurable goals. The following outlines the progress of the town in achieving the measurable goals for Stormwater Years 5 and 6. The annual evaluation of BMPs is also detailed in Table 2. The annual evaluation also discusses activities for the next reporting cycle, and identifies any changes in the identified BMPs or measurable goals.

#### **4.2 PUBLIC EDUCATION AND OUTREACH**

The Department of Public Works (DPW) and the Board of Health continue to work together on public education and outreach. The DPW distributed water conservation brochures with the water bills. The Board of Health held an annual hazardous waste collection event.

#### **4.3 PUBLIC PARTICIPATION AND INVOLVEMENT**

There are several teams and committees involved with public participation, including the DPW, Conservation Commission and the Manchester-by-the-Sea Stream Team. The DPW and Conservation Commission worked together on a stream cleaning project in the Saw Mill Brook. In addition, the Conservation Commission met twice a month and the Stream Team met once a season. The focus of the Conservation Commission and the Stream Team was stormwater flooding in the Millets Brook and Sawmill Brook. The summary and conclusion of the hydrologic study conducted by Metcalf and Eddy, February 2008, is included in Appendix D.

**TABLE 2**  
**MANCHESTER BY THE SEA, MASSACHUSETTS**  
**NPDES PHASE II STORMWATER MANAGEMENT PLAN**  
**YEARS 5 AND 6 ANNUAL EVALUATION OF MINIMUM CONTROL MEASURES**

BMP Category in Notice of Intent (NOI)		BMP	Department Responsible for Implementing BMP	Measurable Goals	5th Year Goals	Progress on Goal(s) - Year
<b>1.0 Public Education and Outreach</b>						
1.1	Homeowner Focus	Water Conservation Brochures	DPW	Brochure Distribution (goal of over 1700)	Continue annual mailing Develop stormwater mailing	Mailed Brochure with Water Bills
1.2	General Public Focus	Hold Hazardous Waste Collection	Board of Health	Conduct annual event	Hold Annual Event	Board of Health held the annual event
<b>2.0 Public Involvement and Participation</b>						
2.1	General Public Focus	Stream Cleaning	DPW/ Conservation Commission	Annual Project	Complete another Stream Cleaning Project	DPW and Conservation Commission worked together on stream cleaning project in the Saw Mill Brook
2.2		Stake Holder Meetings	Conservation Commission/ Stream Team	Conservation Meetings (Goal - 16 times per year)  Stream Team (Goal - 9 times per year)	Meetings	Conservation Commission meet twice a month Stream Team met once a season
<b>3.0 Illicit Discharge Detection and Elimination</b>						
3.1	Stormwater System Mapping	Map stormwater system	DPW	Build GIS system map for stormwater planning, illicit discharge program, tracking system, and maintenance program	Develop GIS system map for stormwater system	GIS map of storm sewer system is 100% complete
3.2	Regulatory Mechanism	Develop Town bylaw prohibiting illegal non-storm water discharges into storm sewer system	DPW/ Conservation Commission/ Planning Board/ Building Inspector	Review existing policy and implement recommendations for regulatory revisions	Develop and Implement Bylaw	DPW reviewed the OAG models for draft bylaw
<b>4.0 Construction Site Storm Water Runoff Control</b>						
4.1	Regulatory Mechanism	Develop and implement Town bylaws regulating erosion and sediment control for construction sites utilizing appropriate BMPs	DPW/ Conservation Commission/ Planning Board/ Building Inspector	Implement Town bylaws	Finalize Bylaw	Bylaw adopted in April 2007 Included in Zoning Bylaw
<b>5.0 Post-Construction Storm Water Management in New Development and Redevelopment</b>						
5.1	Regulatory Mechanism	Develop and implement bylaws regulating controls for post-construction runoff utilizing appropriate BMPs	DPW/ Conservation Commission/ Planning Board/ Building Inspector	Implement bylaws	Finalize Bylaw	Bylaw adopted in April 2007 Included in Zoning Bylaw
<b>6.0 Pollution Prevention and Good Housekeeping for Municipal Operations</b>						
6.1	Stormwater Sewer System Operation and Maintenance	Stormwater system and catch basin inspection program	DPW	Annual Inspection	Inspect catch basins/determine if cleaning frequency should be increased	DPW Inspected catch basins and cleaned as needed
6.2		Septic System Controls	BOH	New Septic System Repairs	Continue to Monitor Septic System Improvements	Several Septic System Upgrades
6.3	Municipal Roads	Street sweeping	DPW	Sweep all roads	Complete Street Sweeping by June 1	Street sweeping is conducted annually and All roads swept by June 1
6.4			DPW	Goal - Minimum bi-weekly sweepings	Street Sweep Main Roads	Main Roads were swept as necessary

WINNING WITH SUCH PLANNING BOARD TO REQUIRE DEVELOPERS TO PAY FOR...  
their development.

#### **4.4.2 Regulatory Mechanism**

The Department of Public Works (DPW) reviewed a copy of the recommended bylaw from the Office of the Attorney General's (OAG) models for draft Town bylaws. A copy of the OAG draft bylaw is included in Appendix E. The Town is working to draft a bylaw which will prohibit illicit discharges and include procedures for enforcement. The Town is currently working to review the bylaws of similar towns in the area.

#### **4.4.3 Illicit Discharge Detection and Elimination Plan**

The Town determined that there is not one specific way to handle all types of illegal discharges. Procedures for identifying and removing a source of an illicit discharge are highly dependent on the circumstances of the discharge. Each circumstance will be handled on a case by case basis.

### **4.5 CONSTRUCTION SITE RUNOFF CONTROL MEASURES**

#### **4.5.1 Regulatory Mechanism**

The Town reviewed the OAG model bylaws for construction and post construction measures. The models were utilized to amend the Zoning Bylaws to include construction and post construction best management practices. The Zoning Bylaws were amended in April 2007 and the stormwater management provisions of the bylaw are included in Appendix F.

## **4.6 POST-CONSTRUCTION RUNOFF CONTROL MEASURES**

### **4.6.1 Regulatory Mechanism**

The Town reviewed the OAG model bylaws for construction and post construction measures. The models were utilized to amend the Zoning Bylaws to include construction and post construction best management practices. The Zoning Bylaws were amended in April 2007 and the stormwater management provisions of the bylaw are included in Appendix F.

## **4.7 POLLUTION PREVENTION/GOOD HOUSEKEEPING**

### **4.7.1 Employee Training**

The Town incorporates stormwater training into several of its departments including the Conservation Commission, Fire Department and DPW.

### **4.7.2 Stormwater System Operation and Maintenance**

The DPW inspected the stormwater structures including outfalls and catch basins. Outfall and catch basins were cleaned and repaired, as necessary. In addition, the DPW inspects the structural BMPs annually and after each major storm. The goal is to maintain this program.

### **4.7.3 Municipal Operations**

The municipal housekeeping measures include regular street sweeping. The DPW swept all streets by June 1 and continued to sweep the main streets regularly throughout the summer season (May through September).