

Municipality/Organization: Wrentham Developmental Center

EPA NPDES Permit Number: MAR042030

MassDEP Transmittal Number: W035610

**Annual Report Number
& Reporting Period:**

**Year 14
April 1, 2016 – March 31, 2017**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2017)

Part I. General Information

Contact Person: Michael Gardner

Title: Director of Operations

Telephone #: (508) 384-1656

Email: Michael.gardner@state.ma.us

Mailing Address: Wrentham Developmental Center, P.O. Box 144, Wrentham, MA 02093

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: Michael Gardner

Title: Director of Operations

Date: 27 April 2017

Part II. Self-Assessment

The Wrentham Developmental Center has completed the required self-assessment and has determined that our facility is in compliance with all general permit conditions, effective May 1, 2003, extended May 1, 2008 to present.

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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-01 Revised	Fact sheet in newsletter	Brett Butz/ Compliance	Awareness and Feedback	Continue to have increased our email and electronic presence to promote the letter to all employees and persons in the buildings.	Maintain our annual distribution of the Storm Water Fact Sheet in the facility newsletter, <i>Crossroads</i> .
1-02 Revised	Notice posted in the food and cleaning services building	Brett Butz/ Compliance	Awareness of proper disposal practices	Increased visibility, updated the poster, and performed spot checks around the area to help with compliance throughout the calendar year.	Maintain conspicuous visibility of the posters and continue spot checking.
1-03 Revised	Present a stormwater fact sheet to each new employee at orientation	Mike Gardner/ Operations	Increase awareness and improve work habits	Fact sheet distributed to each employee during orientation.	Change the format and presentation of our stormwater practices to the new employees to include the information.
1-04 Revised	Maintain the stormwater education center in the compliance office	Brett Butz/ Compliance	Increase awareness and available resources for staff with questions	Redeveloped the current center and moved it into the compliance office. Also listed the location on the newsletter in <i>Crossroads</i> .	Moved the information to a new building and included the six best management practices in this year's display.
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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2-01	Recruit designated person per shift; food and cleaning services	Mike Gardner/ Operations	Oversight with increased awareness	Annual Stormwater and Spill Prevention Meeting with all department heads, supervisory administrative personnel, food services manager, and cleaning services manager. (Sign-in required).	Continue to administer Annual Storm Water and Spill Prevention Meeting and begin discussing stormwater at AUD meetings.
Revised					
2-02	Request volunteers per Unit per shift by supervisory personnel	Mike Gardner/ Operations	Oversight with increased awareness	Request volunteers from each Unit for each shift by supervisory personnel at the Annual Stormwater and Spill Prevention Meeting.	Continue to request volunteers and request continued oversight by supervisors.
Revised					
2-03	Security Training and Awareness	Mike Gardner/ Operations	Reporting incidents	The Security Supervisor's attendance at the Annual Stormwater and Spill Prevention Meeting for information gathering. Establish procedures for the reporting and response to incidents.	Review the reporting and response plan and revise the policy as needed.
Revised					
2-04	Training for Transport, Grounds, Paint, and all Maintenance Depts.	Mike Gardner/ Operations	Awareness and Improved Working Habits	Spot meetings to promote proper work habits.	Continue the meetings and general oversight.
Revised					
2-05	Added cigarette butt containers	Mike Gardner/Operations	Reduce cigarette waste throughout grounds	New containers have been added and are frequently emptied. There has been a significant reduction in tobacco litter.	Continue to empty canisters and replace or add receptacles where necessary.
Revised					

Revised					
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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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-01	Regularly inspect outfalls for dry weather discharge	Mike Gardner/ Operations	Early detection and correction	Continued monitoring of outfalls. No dryweather discharge detected.	Continued monitoring of outfalls.
Revised					
3-02	Update map of discharge areas	Mike Gardner/ Operations	Create a easily accessed and mapped area for reference	Map has been created and given to appropriate persons at Operations as well as posting it at the Compliance office.	Improve mapping if needed and establish a tracking and analysis method for discovered floors. Intend to scan all maps into .pdf format.
Revised					
3-03	Use test kits for pH, nitrate, phosphate, copper, and ammonia as nitrogen during severe wet weather	Mike Gardner/ Operations	Early detection and correction	Annual testing (of three outfalls) conducting during rainfall event on 04/08/2014. Tests indicated a normal outfall conditions.	Continue sampling after heavy stormwater sporadically throughout the year.
Revised					
3-04	Spill Response Plan	Mike Gardner/ Operations	Spill control kits on grounds; E.Q. Northeast for clean-up and emergency response.	Addressed at the Annual Stormwater and Spill Prevention Meeting. Spill control kits are maintained in the Plumbing, Security, and Compliance vehicles.	Continued the Annual Stormwater and Spill Prevention Meeting and follow up to check quality of the control kits are adequate.

Revised					
3-05	Fix Discharge Outfalls	Mike Gardner/Operations	Repair outfall locations with deteriorating structures	Replaced two different locations at HHB and near the Carpenter Shop to repair deteriorating infrastructure.	Continue to monitor and correct as needed.
Revised					
Revised					

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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-01	Insert standard construction controls and penalties into contract documents	Mike Gardner/Operations	Erosion, sediment, and waste control.	Standard construction controls have been placed into all contract documents, included site specific material as needed, and added EPA requirements as needed.	Continue to follow our contract procedures about construction control
Revised					
4-02	Perform site inspections and impose penalties as needed	Mike Gardner/Operations	Erosion, sediment, and waste control.	Site inspections are performed as required.	Continue monitoring construction sites.
Revised					
Revised					

Revised					
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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-01	Standard post-construction controls and penalties in contract documents	Mike Gardner/ Operations	Erosion, sediment, and waste control. Soil depth restoration.	Standard post-construction controls maintained in contract documentation.	Standard post-construction controls to be maintained in contract documents.
Revised					
5-02	Monitor post-construction areas	Mike Gardner/ Operations	Flooding, pooling prevention	Monitored Raymond demolition location, cleared outfalls for backup.	Consulted with engineers to discuss correction of pooling issues.
Revised					
Revised					

Revised					
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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-01	Contract for catch basin cleaning, inspection, and repair	Mike Gardner/ Operations	Proper operation of stormwater collection system.	Contract work performed as required by the yearly permit.	Contract activities satisfied.
Revised					
6-02	Town of Wrentham to clean public roads and some parking areas	Mike Gardner/ Operations	Proper operation of system with reduction of salt/sand in catch basins.	Cleaning and sweeping of public roadways and certain parking areas to be completed by the town.	Contract to continue for cleaning/sweeping of remaining areas.
Revised					
6-03	Contract for remaining areas and parking lots to be cleaned.	Mike Gardner/ Operations	Proper operation of system with reduction of sand in catch basins.	Contract for cleaning and sweeping of remaining parking areas completed.	Contract to continue for cleaning/sweeping of remaining areas.
Revised					

6-04	Limit salt use; store salt and sand in a contained area	Mike Gardner/ Operations	Limit salt to water table.	Salt use has been tempered and more sand has been used. Included the salt/sand mix in the Tier II report.	Salt use to continue to be controlled and stored in a roofed area.
Revised					
6-05	Inspect and clean trash and debris from roadsides and culverts	Mike Gardner/ Operations	Proper operation of storm-drain system.	Regular inspection and cleaning of debris from roadside and culverts ongoing.	Regular inspections and spot cleaning, as needed, to continue.
Revised					
Revised					

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 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
7-01	Maintain status of all discharges being “allowable”	Mike Gardner/ Operations	No significant nutrient or sediment loading.	All discharges remain “allowable” under the permit and there have not been any illicit discharges detected. Testing sheet and results are appended.	All discharges are to be maintained as “allowable.” Will continue to monitor for illicit discharges.
Revised					
7-02	Non-stormwater discharges not a significant contributor of pollutants	Mike Gardner/ Operations	Prevent pollutants from entering into the stormwater.	Continue to prevent non-stormwater discharges from becoming a significant contributor of pollutants.	Continue to promote good housekeeping and working conditions to promote proper practices.
Revised					

Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Not applicable to the Wrentham Developmental Center.

Part IV. Summary of Information Collected and Analyzed

Water quality testing was conducted during a rainfall event on 04/21/17. Testing for pH, total phosphorous, ammonia nitrogen, and nitrate are all listed below. All testing was performed at Analytical Balance Corp., 422 W. Grove St., Suite F, Middleborough, MA 02346, using USEPA and MassDEP testing standards.* All test results fell within the approved range and should be considered “normal”.

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, 2016 through March 31, 2017)

Programmatic

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

Education, Involvement, and Training

Estimated number of property owners 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.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/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					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					

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		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	
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)	
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 %)	

▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
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)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

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	

Stormwater Sampling Results for Annual Stormwater Report for the period April 1, 2016-March 31, 2017.

Sampled by: Brett Butz

Sample Date: 21 April 2017

Title: Compliance Officer II

Analyzed by: Analytical Balance, Corp.

Analysis Date: 26 April 2017

Location	pH	Total Phosphorous	Ammonia Nitrogen	Nitrate
Ewalt	6.50	0.090 mg/L	0.17 mg/L	< 0.50 mg/L
Heffron Hall A	6.70	0.110 mg/L	0.20 mg/L	< 0.50 mg/L
Marion Moore Hall	6.70	0.090 mg/L	0.18 mg/L	< 0.50 mg/L

*Note: Please see the attached sheets for analytical method used.



DMR/Southeast Region
Wrentham Developmental Center
68 N. Main Street Suite 102
Carver, MA 02330

COLLECTED BY: B. Butz
TIME: 8:55
LOCATION: Campus
Grab

REPORTED: 04/26/2017
ORDER #: G1712680
SAMPLE DATE: 4/21/2017
DATE RECEIVED: 4/21/2017
SAMPLE ID: 2017 Stormwater
DESCRIPTION: WATER

CERTIFICATE OF ANALYSIS

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Det. Limit*	Result
Test Parameters					
LAB-ID#: 1712680-03					
Ammonia, Nitrogen 350.1	EPA 350.1	04/25/2017	mg/L	0.10	0.18
Nitrate, Nitrogen 4110B	SM 4110 B	04/21/2017	mg/L	0.50	ND
pH	SM 4500 H+B	04/21/2017	S.U.	0-14	6.7
Phosphorus, Total	SM 4500-P B/E	04/25/2017	mg/L	0.01	0.090

NA = Not Applicable
ND = Not Detected
'<' = Less Than
'*' = Detection Limit

Timothy A.
Begley
Approved By:

Digitally signed by Timothy A. Begley
CN=Timothy A. Begley
C=US, O=UNITED STATES
O=Analytical Balance Corp.
E=tim@ab20test.net
Date: 2017.04.26 19:20:17

Lab Manager / Date

DMR/Southeast Region
Wrentham Developmental Center
68 N. Main Street Suite 102
Carver, MA 02330

COLLECTED BY: B. Butz
TIME: 8:45
LOCATION: Heffron Hall A
Grab

CERTIFICATE OF ANALYSIS

REPORTED: 04/26/2017
ORDER #: G1712680
SAMPLE DATE: 4/21/2017
DATE RECEIVED: 4/21/2017
SAMPLE ID: 2017 Stormwater
DESCRIPTION: WATER

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Det. Limit*	Result
LAB-ID#: 1712680-01					
Ammonia, Nitrogen 350.1	EPA 350.1	04/25/2017	mg/L	0.10	0.20
Nitrate, Nitrogen 4110B	SM 4110 B	04/21/2017	mg/L	0.50	ND
pH	SM 4500 H+B	04/21/2017	S.U.	0-14	6.7
Phosphorus, Total	SM 4500-P B/E	04/25/2017	mg/L	0.01	0.11



DMR/Southeast Region
Wrentham Developmental Center
68 N. Main Street Suite 102
Carver, MA 02330

COLLECTED BY: B. Butz
TIME: 8:40
LOCATION: Ewalt
Grab

CERTIFICATE OF ANALYSIS

REPORTED: 04/26/2017
ORDER #: G1712680
SAMPLE DATE: 4/21/2017
DATE RECEIVED: 4/21/2017
SAMPLE ID: 2017 Stormwater
DESCRIPTION: WATER

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Det. Limit*	Result
Test Parameters					
				LAB-ID#: 1712680-02	
Ammonia, Nitrogen 350.1	EPA 350.1	04/25/2017	mg/L	0.10	0.17
Nitrate, Nitrogen 4110B	SM 4110 B	04/21/2017	mg/L	0.50	ND
pH	SM 4500 H+B	04/21/2017	S.U.	0-14	6.5
Phosphorus, Total	SM 4500-P B/E	04/25/2017	mg/L	0.01	0.090