

Municipality/Organization: Wrentham Developmental Center

EPA NPDES Permit Number: MAR042030

MassDEP Transmittal Number: W035610

**Annual Report Number
& Reporting Period:**

**Year 13
April 1, 2015 – March 31, 2016**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2016)

Part I. General Information

Contact Person: Michael Gardner

Title: Director of Operations

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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: 25 April 2016

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 13 (Reliance on non-municipal partners indicated, if any) | Planned Activities |
|----------|---|-------------------------------|---|---|---|
| 1-01 | 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> . |
| Revised | | | | | |
| 1-02 | 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. |
| Revised | | | | | |
| 1-03 | 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. |
| Revised | | | | | |
| 1-04 | 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 | | | | | |
| Revised | | | | | |

1a. Additions

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2. Public Involvement and Participation

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 13 (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 | | | | | |
| Revised | | | | | |
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| Revised | | | | | |
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2a. Additions

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| 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. |
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3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 13 (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 | | | | | |

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| Revised | | | | | |
| Revised | | | | | |

3a. Additions

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|------|------------------------|-----------------------------|--|---|--|
| 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. |
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4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 13 (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 | | | | | |
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| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |

4a. Additions

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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 13 (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 | | | | | |

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| Revised | | | | | |
| Revised | | | | | |

5a. Additions

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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 13 (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 | | | | | |

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|---------|--|-----------------------------|---|---|--|
| 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

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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 13 (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 | | | | | |
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| Revised | | | | | |
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| Revised | | | | | |
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7a. Additions

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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 04/12/16. Testing for pH, total phosphorous, ammonia nitrogen, nitrate, and copper are all listed below. All testing was performed at our wastewater treatment plant by a certified operator in accordance with NPDES and MassDEP testing standards.* All test results fell within the approved range and should be considered “normal”.

*Note: Copper tested using colorimetric test kit.

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, 2015 through March 31, 2016)

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 vector ** | (%) | |

| | (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 ** | % | |

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|--|-------------|--|
| 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, 2015-March 31, 2016.

Sampled by: Brett Butz
Title: Compliance Officer II

Sample Date: 12 April 2016

Analyzed by: Kevin Magowan
Title: Wastewater Treatment Plant Operator 3

Analysis Date: 12 April 2016

| Location | pH | Total Phosphorous | Ammonia Nitrogen | Nitrate | Copper |
|-------------------|-----------|--------------------------|-------------------------|----------------|---------------|
| Ewalt | 6.38 | 0.082 mg/L | 0.95 mg/L | 0.23 ppm | 0.15 ppm |
| Heffron Hall B | 6.80 | 0.062 mg/L | 0.35 mg/L | 0.00 ppm | 0.14 ppm |
| Marion Moore Hall | 6.83 | 0.189 mg/L | 0.65 mg/L | 0.01 ppm | 0.36 ppm |