

Municipality/Organization: Town of Oxford

EPA NPDES Permit Number: MAR041147

MaDEP Transmittal Number: W-041061

**Annual Report Number
& Reporting Period:** No. 15: April 2017-March 2018

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Sean M. Divoll, P.E. **Title:** Director of Public Works

Telephone #: 508-987-6006 **Email:** sdivoll@town.oxford.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: Dennis Power

Title: Acting Town Manager

Date: 4-27-18

Part II. Self-Assessment

The Town of Oxford has successfully conducted activities addressing the Minimum Control Measures of the NPDES Phase II Stormwater Permit during Year 15 of the permitting period.

In addition to meeting requirements set out in the Town of Oxford's Best Management Practices Plan, the Town of Oxford continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (CMRSWC). The CMRSWC provided training, educational materials and support for MS4 requirements to Oxford and other member communities throughout the year.

Specific activities and goals achieved during Year 15 are outlined in Part III of this Annual Report.

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 15 | Planned Activities – Next Permit Period |
|----------|--|---|---|---|--|
| 1A | Develop Stormwater Section of Town Website | Highway Department and Town Website Manager (s) | Measure number of hits annually. | The Stormwater Management website continues to be updated with information for Town residents and Town staff. | Continue to update the website as-needed. |
| Revised | | | | Additionally, the CMRSWC website is continually updated with coalition project information and educational materials. | |
| 1B | Develop and Broadcast Stormwater Presentation on Local Cable Network | Highway Department and Conservation Commission | Cable TV tapes of shows. | No progress on developing a stormwater presentation due to lack of equipment and personnel to develop presentation. An educational stormwater video has been made available as noted below in BMP 1D. | Research other sources for developing a local stormwater presentation. |
| Revised | | | | | |
| 1C | Distribute Brochures and Fact Sheets to Businesses and Residents | Highway Department and Conservation Commission | Number of articles and copies of materials. | Fact sheets and brochures continued to be handed out at the Land Management Office window at Town Hall. An online Stormwater Toolbox has been made available for businesses and residents. | Continue to distribute fact sheets and information flyers. |
| Revised | <i>In addition to hard copy brochures and fact sheets, provide an online reference tool.</i> | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 15 | Planned Activities – Next Permit Period |
|----------|---|--|----------------------------|---|--|
| 1D | Develop Stormwater Management Video | Highway Department and Conservation Commission | Number of rentals. | <i>Reduce Runoff: Slow it Down, Spread it Out, Soak it In!</i> video has been broadcast on the local cable channel. The program is a compilation of four videos co-produced by the EPA and The Weather Channel. <i>Storm Chasers</i> video has been created by WPI student project. | Periodically broadcast Stormwater Videos created by the Central Massachusetts Regional Stormwater Coalition on the Oxford Cable Access channel. The <i>Storm Chasers</i> video is available for viewing on the Town's website. |
| Revised | Obtain a Stormwater Management Educational Video rather than create our own | | Number of times broadcast. | | |
| 1E | Develop a Poster Display Regarding Stormwater Issues | Highway Department and Conservation Commission | List of display locations. | Stormwater posters continue to be displayed at the Town Hall alongside the Land Management office. | Continue to display posters and updated information. |
| Revised | | | | | |

1a. Additions

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|----|---|--------------------|-------------------------------------|---|--|
| 1F | <i>Develop a Rain Garden Program to promote use of rain gardens in new and redevelopment sites.</i> | Highway Department | Number of new rain gardens in Town. | A new rain garden was incorporated into the Carbuncle Beach improvements in September 2016. Volunteers cleaned out and planted new plants in the Town Hall rain garden in April 2016. | Continue to distribute Rain Garden flyers to residents and developers. |
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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 15 | Planned Activities – Next Permit Period |
|----------|--|---|--|--|---|
| 2A | Mark Storm Drains with Buttons or Stencils | Highway Department, Conservation Commission, and Volunteers | 50% of the storm drains marked by year 5 with door hangers placed in associated neighborhoods. | 100% of catch basins were stenciled in previous permit years. | Oxford DPW plans to continue with the stenciling program in the next Permit Period to re-stencil faded markings. |
| Revised | | | | | |
| 2B | Establish a Storm Water Telephone Hotline | Highway Department and Town Website Manager (s) | Record number of phone calls to hotline, copies of articles. | Oxford DPW fielded over 25 stormwater related calls. An automated tracking system has been developed to record stormwater-related issues using PeopleGIS software. | Oxford DPW plans to continue taking stormwater calls on the main DPW phone number. |
| Revised | We have determined that a separate 'hotline' is not necessary or feasible. Oxford DPW takes all stormwater calls on the main DPW phone number. | | | | |
| 2C | Conduct River, Stream, and Pond Cleanups | Highway Department, Conservation Commission, and Volunteers | Cleaner streams as documented by before and after photographs. | Multiple cleanup activities were conducted throughout the year by volunteers in the French River and Carbuncle Pond. | Continue to coordinate/encourage volunteer cleanup projects. |
| Revised | | | | | |
| 2D | Establish a Native Tree and Shrub Planting Program | Highway Department, Conservation Commission, and Volunteers | Record the number, location and kind of tree or shrub planted. | 100 dogwood shrubs were distributed throughout the town thru the Seedling Shrub Program in Year 14. | Trees shall be replaced throughout Town as needed. The Seedling Shrub Program is will be active as funds become available. |
| Revised | | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 15 | Planned Activities – Next Permit Period |
|-----------------|---|--|--|--|--|
| 2E | Establish a Classroom Education Program | Conservation Commission | Classroom education program implemented by Year 5. | WPI students developed a stormwater toolkit for elementary school students through a project sponsored by CMRSWC and Mass DEP. | Work with the School Department to incorporate Stormwater Educational Programs into the school's curriculum. |
| Revised | | | | | |
| 2F | Prepare Press Releases | Highway Department and Conservation Commission | Copies of press articles. | No press releases were issued. | Press releases will be issued on an as-needed basis. |
| Revised | | | | | |

2a. Additions

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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 15 | Planned Activities – Next Permit Period |
|----------|---|---|--|---|---|
| 3A | Develop Town Storm Drain Outfall Map | Highway Department, Planner/Engineer, Outside Resources (possibly Worcester Polytech) | All outfalls mapped by Year 5. | The DPW has completed mapping the entire storm drain system. The inventory has been incorporated into an integrated stormwater mapping and inspection system. | Continue fine-tuning the GIS mapping system |
| Revised | | | | | |
| 3B | Develop Illicit Discharge Prohibition Ordinance | Planning Board and Board of Health | Obtain authorization to control inputs to the municipal drainage system. Bylaw at Town meeting by end of Year 2. | Illicit Discharge By-law was adopted in 2005. | Continue enforcement of by-law. |
| Revised | | | | | |
| 3C | Develop Illicit Discharge Detection and Elimination Plan and Implement Activities | Highway Department, Planning Board, and Board of Health | All outfalls examined by Year 4. Sources traced and conclusion documented within one year of discovery. | The DPW continued to follow up on illicit discharge reports. Department heads participated in an IDDE Education and Communication Training Workshop in year 13. | Oxford DPW will continue to follow up on all illicit connections in the following permit period |
| Revised | | | | | |
| 3D | Incorporate Information on Illicit Discharges into Public Education and Outreach Topics | DPW | Copies of materials. | Information on Illicit Discharge has been made available on the Town's website and the CMRSWC website and includes a Resource Toolbox for homeowners. Illicit Discharge hand-outs have been made available at the Town Hall for the public and were handed out at Bulk Item Drop Off Days. | Oxford DPW will continue to update the website with additional information and resources. Continue to distribute informational flyers at Bulk Item Drop Off Days. |
| Revised | | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 15 | Planned Activities – Next Permit Period |
|-----------------|--|--|--------------------------------------|--|--|
| 3E | Identify Department to Take Stormwater Calls | Highway Department and Board of Health | Log of complaints and actions taken. | The Oxford DPW and Board of Health continue to take illicit discharge calls. An automated tracking system has been developed to record stormwater-related issues. | Continue coordination effort among Oxford DPW and BOH. |
| Revised | | | | | |

3a. Additions

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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 15 | Planned Activities – Next Permit Period |
|----------|--|--|--|---|---|
| 4A | Develop Erosion Control Regulation | Planning Board, Board of Health, and Conservation Commission | Bylaw at Town meeting by end of Year 3. | A Stormwater Management and Land Disturbance By-law was adopted in 2005. | Continue enforcement of by-law. |
| Revised | | | | | |
| 4B | Conduct Inspections for Erosion Controls | Planning Board, Highway Department, and Consultant | Inspection checklist and documented inspections. | Erosion Control Inspections have been conducted by DPW personnel and the Conservation Commission. | Continue inspections. |
| Revised | | | | | |
| 4C | Identify Department to Take Stormwater Calls | Planning Board and Highway Department | Record number of phone. | The Oxford DPW and Planning Board continue to take stormwater-related calls. | Continue coordination effort among Oxford DPW and Planning Board. |
| Revised | | | | An automated tracking system has been developed to record stormwater-related issues. | |

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 15 | Planned Activities – Next Permit Period |
|-----------------|--|--|--|--|--|
| 5A | Develop BMP Regulation | Planning Board and Selectmen | Bylaw at Town meeting by end of Year 2. | A Stormwater Management By-law was adopted in 2005. | Continue enforcement of by-law. |
| Revised | | | | | |
| 5B | Develop and Implement Inspection Program | Planning Board, Highway Department, and Consultant | Retain copies of maintenance reports received annually, plus records of inspections completed and results. | Inspection program on-going. Annual reports continue to be reviewed and recorded. | Continue inspection program. |
| 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 15 | Planned Activities – Next Permit Period |
|---------------|--|-----------------------------------|---|--|--|
| 6A Revised | Clean Catch Basins | Highway Department | Clean all catch basins. | 100% of all catch basins were cleaned at least once in the spring. High impact basins were cleaned again in the fall. | Continue to clean 100% of all catch basins. |
| 6B Revised | Sweep Streets in Town | Highway Department | Priority plan of sweeping based on water quality impact. Volume of sweepings collected. | 100% of streets were swept in the spring. High impact streets were swept again in the fall. | Continue to sweep 100% of all streets. |
| 6C Revised | Develop an Inspection and Maintenance Plan | Highway Department | Written schedule and records of inspections and maintenance. | Inspections and repair are noted in a log by the Operations Manager. An electronic inspection system has been developed using mobile devices. | Oxford DPW will continue with its inspection and maintenance plan in the next permit period. DPW personnel will be trained for mobile device use in the next permit. |
| 6D Revised | Continue Existing Pollution Prevention and Good Housekeeping Practices at the Highway Garage | Highway Department | Ensure existing practices are continued. | Good Housekeeping on-going. | Continue on-going good housekeeping. |
| 6E Revised | Evaluate Alternative Vehicle Washing Options at the Highway Garage | Highway Department and Consultant | New method for handling vehicle wash water at the site by the end of Year 2. | Qualifications-based selection process for Feasibility Study designer services underway. | Feasibility Study to be completed in the next permit period. |
| 6F Revised | Evaluate Pollution Prevention BMPs for the Fueling Station at the Highway Garage | Highway Department and Consultant | As-built sketches or plans and photos. | A Fuel and Oil Handling Standard Operation Procedure has been developed and was followed. | Continue to implement the Fuel and Oil Handling Standard. |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 15 | Planned Activities – Next Permit Period |
|-----------------|--|---|---|--|---|
| 6G | Evaluate Municipal Facilities Throughout Town for Potential Stormwater Impacts | Highway Department and Consultant | As-built sketches or plans and photos. | Complete. | Re-evaluate on an as-needed basis. |
| Revised | | | | | |
| 6H | Ensure Proper Waste Disposal in Town for Hazardous and Special Wastes | Highway Department and Board of Health | Document quantity of wastes collected annually. | On-going | Continue hazardous and special waste disposal vigilance. |
| Revised | | | | | |
| 6I | Ensure Water Quality Improvements are Considered for Flood Projects | Highway Department | Records of Flood Control Projects | N/A. | N/A. |
| Revised | | | | | |
| 6J | Conduct Town Employee Stormwater Training | Town Administrator, Highway Department, Police and Fire Departments, and Consultant | Attendance sheet and copy of program. | CMRSWC conducted Stormwater training for member communities. Video recordings are available for viewing. | Refresher training will be conducted in the next permit period. |
| Revised | | | | | |

6a. Additions

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

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Next Permit Period |
|-----------------|--|--|--|---|--|
| 7A | Develop a Water Quality Strategy for 303d Waters | Town Engineer & Consultant | Summary of existing pollution prevention efforts, future needs, and responsible parties. Copy of surface water quality strategic plan. | All roadways scheduled for reconstruction are now constructed with deep sump catch basins and cleanable outfalls. | Continue drainage improvements. |
| Revised | | | | | |
| 7B | Implement BMPs from Water Quality Strategy | Town Engineer, Consultant, & Town Departments (to be determined) | Photographs, logs, and BMP descriptions for completed efforts and water quality improvements. | No progress. | See BMP 7A |
| Revised | | | | | |

7a. Additions

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7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

None.

Part V. Program Outputs & Accomplishments (OPTIONAL)

The Town has brought renewed effort to bring Oxford fully into compliance with the NPDES minimum control measures. Programmatic

| | | |
|--|-------|----------|
| Stormwater management position created/staffed | (y/n) | yes |
| Annual program budget/expenditures | (\$) | \$15,000 |
| | | |
| | | |

Education, Involvement, and Training

| | | |
|---|---------------|-----|
| Estimated number of residents reached by education program(s) | (# or %) | 30% |
| Stormwater management committee established | (y/n) | no |
| Stream teams established or supported | (# or y/n) | yes |
| Shoreline clean-up participation or quantity of shoreline miles cleaned | (y/n or mi.) | yes |
| Household Hazardous Waste Collection Days | | |
| ▪ days sponsored | (#) | 0 |
| ▪ community participation | (%) | 0 |
| ▪ material collected | (tons or gal) | 0 |
| School curricula implemented | (y/n) | no |
| | | |
| | | |

Legal/Regulatory

| | In Place Prior to Phase II | Under Review | Drafted | 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

| | | |
|--|-------------------|------|
| Outfall mapping complete | (%) | 100% |
| Estimated or actual number of outfalls | (#) | 289 |
| System-Wide mapping complete | (%) | 100% |
| Mapping method(s) | | |
| ▪ Paper/Mylar | (%) | 0% |
| ▪ CADD | (%) | 0% |
| ▪ GIS | (%) | 100% |
| Outfalls inspected/screened | (# or %) | 0 |
| Illicit discharges identified | (#) | 0 |
| Illicit connections removed | (#) (est. gpd) | 0 |
| % of population on sewer | (%) | 13% |
| % of population on septic systems | (%) | 87% |
| | | |
| | | |

Construction

| | | |
|---|------------|------|
| Number of construction starts (>1-acre) | (#) | 2 |
| Estimated percentage of construction starts adequately regulated for erosion and sediment control | (%) | 100% |
| Site inspections completed | (# or %) | 100% |
| Tickets/Stop work orders issued | (# or %) | 0 |
| Fines collected | (# and \$) | 0 |
| Complaints/concerns received from public | (#) | 3 |
| | | |
| | | |

Post-Development Stormwater Management

| | | |
|--|----------|------|
| Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control | (%) | 95% |
| Site inspections completed | (# or %) | 100% |
| Estimated volume of stormwater recharged | (gpy) | ? |
| | | |
| | | |

Operations and Maintenance

| | | |
|--|----------------|----------|
| Average frequency of catch basin cleaning (non-commercial/non-arterial streets) | (times/yr) | 2-times |
| Average frequency of catch basin cleaning (commercial/arterial or other critical streets) | (times/yr) | 2-times |
| Total number of structures cleaned | (#) | 1,882 |
| Storm drain cleaned | (LF or mi.) | 0 lf |
| Qty. of screenings/debris removed from storm sewer infrastructure | (lbs. or tons) | 250-tons |
| Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.) | | landfill |
| Cost of screenings disposal | (\$) | \$6,166 |
| | | |
| | | |

| | | |
|--|----------------|------------|
| Average frequency of street sweeping (non-commercial/non-arterial streets) | (times/yr) | 2-times |
| Average frequency of street sweeping (commercial/arterial or other critical streets) | (times/yr) | 4-times |
| Qty. of sand/debris collected by sweeping | (lbs. or tons) | 1,400-tons |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) | (location) | landfill |
| Cost of sweepings disposal | (\$) | \$34,118 |
| Vacuum street sweepers purchased/leased | (#) | 0 |
| Vacuum street sweepers specified in contracts | (y/n) | no |
| | | |
| | | |

| | | |
|--|-------------|-----|
| Reduction in application on public land of: (“N/A” = never used; “100%” = elimination) | | |
| ▪ Fertilizers | (lbs. or %) | 20% |
| ▪ Herbicides | (lbs. or %) | N/A |
| ▪ Pesticides | (lbs. or %) | 20% |
| | | |
| | | |

| | | |
|--|---|---------------|
| Anti-/De-Icing products and ratios | % NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand | 95% 5% |
| Pre-wetting techniques utilized | (y/n) | no |
| Manual control spreaders used | (y/n) | no |
| Automatic or Zero-velocity spreaders used | (y/n) | yes |
| Estimated net reduction in typical year salt application | (lbs. or %) | N/A |
| Salt pile(s) covered in storage shed(s) | (y/n) | yes |
| Storage shed(s) in design or under construction | (y/n) | N/A |
| | | |