

**Municipality/Organization:** HOPKINTON

---

**EPA NPDES Permit Number:** MAR041124

---

**MassDEP Transmittal Number:** W-040816

---

**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:** JOHN K. WESTERLING

**Title:** DIRECTOR OF PUBLIC WORKS

---

**Telephone #:** 508-497-9740

**Email:** jwesterling@hopkintonma.gov

---

**Mailing Address:** PO Box 209, Hopkinton, MA 01748

---

### **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:** John K. Westerling

---

**Title:** Director of Public Works

---

**Date:** April 28, 2017

---

## **Part II. Self-Assessment**

The Town of Hopkinton remains committed to completing all of the Minimum Control Measures. The May 2016 Annual Town Meeting appropriated \$370,000 in the FY17 operating budget to cover the costs of stormwater compliance. The May 2017 Annual Town Meeting will be asked to vote to appropriate \$370,000 for stormwater compliance in FY18.

The Town of Hopkinton also rebuilt or repaired 54 catch basins and rebuilt or repaired 3 culverts.

Hopkinton joined 29 other communities in the Central Massachusetts Regional Stormwater Coalition in 2013 to further its ability to comply with regulations and to better educate its residents. A summary of Hopkinton's activities as part of that Coalition is provided at the end of this Annual Report.

The Town of Hopkinton completed the self-assessment and determined that our municipality is in compliance with the Minimum Control Measures, except for those detailed on the following pages.

### 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)<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                                                                                                                                                                             | Planned Activities                                                                            |
|----------|---------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 1-1      | Annual Hazardous Waste Collection Day             | DPW                           | Hold Haz Waste Day. Advertise through descriptive flyer and media spots. Track number of cars and quantities. | Held 7/16/16 in Hopkinton. Descriptive flyer mailed to all residents. Posted on website and newspaper. Number of cars and type of waste tracked. Completed measurable goals. E-waste collection offered weekly in Hopkinton's Recycling Center.                                                                                                                                                                                                                                                           | Sponsor Hopkinton only Collection Day scheduled for July 2017 and continue E-waste recycling. |
| 1-2      | Promoting Water Conservation Practices            | DPW                           | Provide conservation kits. PSAs on water conservation. Public education during Drinking Water Week.           | Adopted water supply conservation restrictions, conditions or requirements limiting the use of water as necessary to protect the water supply or required to meet state regulations. Ongoing practices include rain barrel program, shower/toilet retro kits, cable tv shows/updates, communication with Conservation Commission and routine inspection/maintenance of water supply system. Finalized SWMI study with funds received from DEP's SWMI grant to implement groundwater recharge regulations. | Continue various programs.                                                                    |
| 1-3      | Issue education stormwater press release          | DPW<br>SuAsCo                 | Complete article on SWMP and publish. Post educational stormwater flyer on website                            | Completed measurable goals in program year 3                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                               |
| 1-4      | Send out Stormwater Flyer to Community Businesses | DPW<br>SuAsCo                 | Distribute and post stormwater flyer in Independent and on website, HCAM-TV.                                  | Completed measurable goals in program year 3                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                               |

|     |                                                         |                |                                                               |                                                                                                    |                   |
|-----|---------------------------------------------------------|----------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------|
| 1-5 | Place education information on public access television | DPW<br>HCAM-TV | Obtain "Stormwater" PSAs and air on HCAM-3 OPTV-8 and track . | Received Stormwater PSAs from the SuAsCo Watershed Community Council for distribution and display. |                   |
| 1-6 | Place education information on the Town's website       | DPW            | Post stormwater info on website and update regularly          | DPW website contains information and links on recycling and water conservation.                    | Continue program. |



## 2. Public Involvement and Participation

| BMP ID # | BMP Description                                             | Responsible Dept./Person Name | Measurable Goal(s)                                                                                   | Progress on Goal(s)<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                     | Planned Activities                               |
|----------|-------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| 2-1      | Public presentations, access to SWMP and Receipt of Comment | DPW                           | Make final SWMP accessible for public viewing.                                                       | Completed program year 1.                                                                                                                                                                                                                                                                                                                         |                                                  |
| 2-2      | Public access to Annual Report                              | DPW                           | Make Annual Report accessible for public viewing                                                     | Annual Report available for review at DPW.                                                                                                                                                                                                                                                                                                        | Continue to make Annual Report available at DPW. |
| 2-3      | Assist with Local Cleanup Activities                        | DPW<br>ConCom                 | Offer assistance with local cleanup activities. Track activities, participants, areas and quantities | Provided recycling containers on Marathon Day and throughout Parks and Recreation properties. Operate Recycling Center on weekly basis to collect recyclables. Operate bulk white metal collection monthly to collect items. Lake Whitehall cleanup occurs annually by volunteers. Sustainable Green Committee conducts cleanup around Earth Day. | Continue programs                                |
| 2-4      | Circulate Stormwater Traveling Display in community         | DPW<br>SuAsCo                 | Display at various Town locations and track                                                          | Completed in program year 4                                                                                                                                                                                                                                                                                                                       |                                                  |
| 2-5      | Participate in SuAsCo Summit                                | DPW<br>SuAsCo                 |                                                                                                      | Completed in program year 5                                                                                                                                                                                                                                                                                                                       |                                                  |

### 3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description                                                | Responsible Dept./Person Name | Measurable Goal(s)                                                                                                                 | Progress on Goal(s)<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                               | Planned Activities                                                                      |
|----------|----------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 3-1      | Update outfall location map                                    | DPW Planning Board            | Outfall verification and identification                                                                                            | Add GIS drainage information to town's website. As of March 2010 an estimated 99% of the stormwater outfalls and 60% of the storm drainage piping system within the Town were identified on the GIS mapping | Continue to identify and add stormwater infrastructure to Town's new GIS website.       |
| 3-2      | Adopt an Illicit Discharge and Connection Stormwater Ordinance | DPW                           | Draft ordinance. Approve by Town Meeting. Track enforcement issues                                                                 | The draft IDDE plan was completed and appears in the May 1, 2016 Annual Town Meeting warrant.                                                                                                               | Seek Town Meeting approval at May 1, 2016 Town Meeting.                                 |
| 3-3      | Implement an Illicit Discharge Detection and Elimination Plan  | DPW                           | Develop the Illicit Discharge Detection Elimination Plan                                                                           | Stormwater outfalls were inspected throughout the year and cleared as necessary. The DPW cleared 4 swales this year.                                                                                        | Continue program                                                                        |
| 3-4      | Establish a Formal Septic System Management Program            | Board of Health               | Permitting system in use. Track number of haulers, installers, C of Cs, failed systems, routine pumping and participants in CSMBLP | All tracking systems are in place and currently in use. Board of Health continued financial assistance to homeowners through Community Septage Management Program                                           | Continue program                                                                        |
| 3-5      | Conduct I/I removal in sewer system                            | DPW                           | Gain SRF funding. Conduct study areas of concern, Develop I/I removal plan. Perform I/I removal.                                   | I/I study completed. Leak detection completed. Meter installation includes confirming that no illegal connections are made into system.                                                                     | Continue program                                                                        |
| 3-6      | Conduct stormdrain stenciling                                  | DPW                           | Identify areas to be stenciled. Track number of drains stenciled. Press release and runoff reduction tips.                         | Did not complete measurable goal.                                                                                                                                                                           | Continue scheduled drain stenciling program and solicit volunteers to complete program. |

#### 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description                                        | Responsible Dept./Person Name                | Measurable Goal(s)                                                                                                                  | Progress on Goal(s)<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                        | Planned Activities |
|----------|--------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 4-1      | Develop an Erosion and Sediment Control Ordinance      | Planning Board<br>Dpw<br>ConCom<br>Bldg Dept | Draft Ordinance, present at Town Meeting, track enforcement                                                                         | Completed year 6. Stormwater Management and Erosion Control Bylaw adopted at Spring 09 Town Meeting                                                                                                  |                    |
| 4-2      | Develop a Site Inspection Form and Conduct inspections | Planning Board<br>DPW<br>ConCom              | Develop a Site Inspection Form, Track frequency of inspections, completion of inspection forms and number of failed BMPs discovered | Completed year 6. Stormwater Management and Erosion Control (SWMEC) Bylaw adopted Spring 09 Town Meeting. Planning Board developed and approved Stormwater Regulations to supplement the SWMEC Bylaw | Continue program   |
| 4-3      | Develop and Implement a Citizen Complaint Hotline      | DPW<br>Webmaster                             | Establish and advertise hotline. Track number of complaints and remediation                                                         | DPW receives calls regarding drainage problems and dispatch personnel to investigate/repair.                                                                                                         | Continue program   |



## 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)<br>(Reliance on non-municipal partners indicated, if any) | Planned Activities |
|----------|--------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------|
| 5-1      | Revise the Site Plan Review submission requirements and procedures | Planning Board                | Draft Amendment, hold public hearing, Town Meeting approval. | Completed year 3. Revisions approved at May 2005 Town Meeting.                |                    |



## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

| BMP ID # | BMP Description                                                                | Responsible Dept./Person Name | Measurable Goal(s)                                                                                       | Progress on Goal(s)<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                     | Planned Activities |
|----------|--------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 6-1      | Develop a Formal Training Program for DPW staff.                               | DPW<br>HR                     | Develop manual and conduct training, track. Repeat every 2 years.                                        | Responsible personnel are trained on sweeping, catch basin cleaning, flushing procedures and equipment operation. DPW personnel also attend trainings by Baystate Roads and Massachusetts Highway Association related to BMPs, application of winter materials, and proper prewetting techniques. | Continue program   |
| 6-2      | Develop a Formal Catch Basin Cleaning Program                                  | DPW                           | Purchase vacuum truck. Establish quadrants and prioritize. Clean 50% CBs/year                            | 100% of all Town catch basins were cleaned this year. The Town contracted with a private vendor to clean and dispose of the material.                                                                                                                                                             | Continue program   |
| 6-3      | Develop a structural BMP Maintenance Program                                   | DPW                           | Inventory and identify maintenance requirements, develop a schedule, track                               | DPW to contract with a private contractor for inspection and cleaning of all inventoried structural BMPs                                                                                                                                                                                          | Continue program   |
| 6-4      | Formalize the Existing Parking Lot and Street Sweeping Program                 | DPW                           | Inventory public streets and parking lots and prioritize sweeping activities. Sweep minimum of once/year | All town streets are swept once/year using the Town's two sweepers. The town disposed of 410 tons of street sweepings in 2016.                                                                                                                                                                    | Continue program   |
| 6-5      | Implement Stormwater Pollution Prevention Plan                                 | DPW                           | Finalize SWPPP Schedule Plan implementation, track                                                       | SWPPP was completed on the Wood Street DPW facility.                                                                                                                                                                                                                                              | Continue program   |
| 6-6      | Develop a Landscape and Lawn Care Policy for properties under DPW Jurisdiction | DPW                           | Develop, implement policy. Provide policy to employees and contracted lawn services.                     | Fertilization schedule was established for parks and fields. All fertilization work is conducted by private vendors through the Parks/Recreation Committee – no fertilizing done by                                                                                                               | Continue program   |

|  |  |  |  |                                                                                                                                                                              |  |
|--|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  |  |  |  | <p>DPW staff. The DPW also received approval of a VMP and a YOP for treatment of weeds in the sidewalk along Main Street to ensure responsible application of herbicide.</p> |  |
|--|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

#### Part IV. Summary of Information Collected and Analyzed

GPS identification of storm drains, outfalls and other wetland resource areas. (Designated MS4 Areas) Yes – 99%

#### 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)             | No           |
| Annual program budget/expenditures **                         | (\$)              | \$370,000    |
| 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)         | No |
| Stream teams established or supported                                      | (# or y/n)    | No |
| Shoreline clean-up participation or quantity of shoreline miles cleaned ** | (y/n or mi.)  | NA |
| Shoreline cleaned since beginning of permit coverage                       | (mi.)         | NA |
| Household Hazardous Waste Collection Days                                  |               |    |
| ▪ days sponsored                                                           | (#)           | 1  |
| ▪ community participation                                                  | (# or %)      |    |
| ▪ material collected                                                       | (tons or gal) |    |
| School curricula implemented                                               | (y/n)         |    |
|                                                                            |               |    |



## Legal/Regulatory

|                                                    | In Place<br>Prior to<br>Phase II | Reviewing<br>Existing<br>Authorities | Drafted | Draft<br>in<br>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                                           | (%)                     | 99       |
| Estimated or actual number of outfalls                             | (#)                     | 605      |
| System-Wide mapping complete (complete storm sewer infrastructure) | (%)                     | 60       |
| Mapping method(s)                                                  |                         |          |
| ▪ Paper/Mylar                                                      | (%)                     | Yes      |
| ▪ CADD                                                             | (%)                     | Yes      |
| ▪ GIS                                                              | (%)                     | Yes      |
| Outfalls inspected/screened **                                     | (# or %)                | 18       |
| Outfalls inspected/screened (Since beginning of permit coverage)   | (# or %)                |          |
| Illicit discharges identified **                                   | (#)                     | 0        |
| Illicit discharges identified (Since beginning of permit coverage) | (#)                     |          |
| Illicit connections removed **                                     | (# ); and<br>(est. gpd) | 0        |
| Illicit connections removed (Since beginning of permit coverage)   | (#); and<br>(est. gpd)  |          |
| % of population on sewer                                           | (%)                     | 40       |
| % of population on septic systems                                  | (%)                     | 60       |



## Construction

|                                                                                                      | (Preferred Units) | Response |
|------------------------------------------------------------------------------------------------------|-------------------|----------|
| Number of construction starts (>1-acre) **                                                           | (#)               | 6        |
| 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 **                                                          | (#)               |          |
|                                                                                                      |                   |          |
|                                                                                                      |                   |          |

## Post-Development Stormwater Management

|                                                                                                                          |          |      |
|--------------------------------------------------------------------------------------------------------------------------|----------|------|
| Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control | (%)      | 100% |
| Site inspections (for proper BMP installation & operation) completed **                                                  | (# or %) | 100% |
| BMP maintenance required through covenants, escrow, deed restrictions, etc.                                              | (y/n)    |      |
| Low-impact development (LID) practices permitted and encouraged                                                          | (y/n)    | Yes  |
|                                                                                                                          |          |      |
|                                                                                                                          |          |      |

## Operations and Maintenance

|                                                                                              |                |              |
|----------------------------------------------------------------------------------------------|----------------|--------------|
| Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **           | (times/yr)     | One          |
| Average frequency of catch basin cleaning (commercial/arterial or other critical streets) ** | (times/yr)     | One          |
| Qty of structures cleaned **                                                                 | (#)            | 2,640 = 100% |
| Qty. of storm drain cleaned **                                                               | (%, LF or mi.) | 6 total      |
| 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) | \$33.20/basin |
| • Disposal cost**                                 | (\$)                    |               |
| Cleaning Equipment                                |                         |               |
| • Clam shell truck(s) owned/leased                | (#)                     | 1 contracted  |
| • Vacuum truck(s) owned/leased                    | (#)                     | 1 owned       |
| • Vacuum trucks specified in contracts            | (y/n)                   | No            |
| • % Structures cleaned with clam shells **        | (%)                     | 2,625         |
| • % Structures cleaned with vector **             | (%)                     |               |

|                                                                                         | (Preferred Units)  | Response     |
|-----------------------------------------------------------------------------------------|--------------------|--------------|
| Average frequency of street sweeping (non-commercial/non-arterial streets) **           | (times/yr)         | One          |
| Average frequency of street sweeping (commercial/arterial or other critical streets) ** | (times/yr)         | One          |
| Qty. of sand/debris collected by sweeping **                                            | (lbs. or tons)     | 410 tons     |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **                | (location)         | Lorusso Corp |
| 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                                             | (#)                | 2            |
| • Vacuum street sweepers owned/leased                                                   | (#)                | 0            |
| • Vacuum street sweepers specified in contracts                                         | (y/n)              | 0            |
| • % Roads swept with rotary brush sweepers **                                           | %                  | 100%         |
| • % Roads swept with vacuum sweepers **                                                 | %                  | 0            |



|                                                                                                                                |             |  |
|--------------------------------------------------------------------------------------------------------------------------------|-------------|--|
| Reduction (since beginning of permit coverage) in application on public land of:<br>("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 **<br><br>(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas) | % NaCl                |                   |           |
|                                                                                                                                                          | % CaCl <sub>2</sub>   |                   |           |
|                                                                                                                                                          | % MgCl <sub>2</sub>   |                   |           |
|                                                                                                                                                          | % CMA                 |                   |           |
|                                                                                                                                                          | % Kac                 |                   |           |
|                                                                                                                                                          | % KCl                 |                   |           |
|                                                                                                                                                          | % Sand                |                   |           |
| Pre-wetting techniques utilized **                                                                                                                       | (y/n or %)            |                   | Yes       |
| Manual control spreaders used **                                                                                                                         | (y/n or %)            |                   | Yes       |
| Zero-velocity spreaders used **                                                                                                                          | (y/n or %)            |                   |           |
| Estimated net reduction or increase in typical year salt/chemical application rate                                                                       | (±lbs/ln mi.<br>or %) |                   |           |
| Estimated net reduction or increase in typical year sand application rate **                                                                             | (±lbs/ln mi.<br>or %) |                   |           |
| % of salt/chemical pile(s) covered in storage shed(s)                                                                                                    | (%)                   |                   | 100%      |
| Storage shed(s) in design or under construction                                                                                                          | (y/n or #)            |                   | In design |
| 100% of salt/chemical pile(s) covered in storage shed(s) by May 2008                                                                                     | (y/n)                 |                   | Yes       |
|                                                                                                                                                          |                       |                   |           |
|                                                                                                                                                          |                       |                   |           |



## 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 |  |

Central Massachusetts Regional Stormwater Coalition  
2003-MS4 Permit  
Coalition Activities in Year 14 (April 1, 2016-March 31, 2017)

## **Introduction**

The Central Massachusetts Regional Stormwater Coalition (CMRSWC) is an MS4 resource for all member communities. In 2017, total membership reached 31 towns. In December 2016, CMRSWC created four standing sub-committees to allow members to focus efforts on specific issues important to the Coalition. These sub-committees are:

- Education Sub-Committee: responsible for developing and promoting outreach and educational materials for audiences targeted in the 2016-MS4 permit. The committee is the primary liaison to the WPI Project Centers and other university partnerships.
- Program Sub-Committee: responsible for planning and scheduling Annual Meeting, Steering Committee Meetings, educational workshops, and other forums for discussion of MS4 topics.
- Technical Sub-Committee: responsible for managing Coalition's website and shared equipment resources; advising members on relevant technical issues including GIS system maintenance and upgrades.
- Legislative Sub-Committee: serves as the liaison to the Massachusetts Statewide Stormwater Collaborative; responsible for tracking MS4 related legislation and regulations and keeping the legislature and regulatory agencies informed of the concerns of member communities.

The CMRSWC Steering Committee held four meetings during this 12 month reporting cycle. The CMRSWC Annual Meeting was held on September 20, 2016 in Holden. CMRSWC's Needham MS4 Technical Training Workshop and Stormwater Video were featured at the Annual Meeting of the Statewide Collaborative on September 27, 2016 at the Massachusetts Department of Environmental Protection central region office in Worcester. Members of CMRSWC attended and actively participated in the Massachusetts Statewide Stormwater Collaborative meetings.

## **MS4 Workshops and Technical Training (Minimum Control Measures 3, 4, 5, and 6)**

### ***Municipal Stormwater Technical Assistant Project***

The CMRSWC was awarded a \$50,000 Municipal Stormwater Technical Assistance Contract Grant from the Massachusetts Department of Environmental Protection to provide technical assistance support and materials designed to help regulated communities in Massachusetts begin to cost-effectively comply with the requirements of the 2016 MS4 Permit. The grant funded the Needham MS4 training workshop, educational and training videos, and stormwater templates.

### ***Needham Workshop***

On June 29, 2016, CMRSWC and the Fuss & O'Neill project team held an MS4 training workshop at the Needham Public Services Administration Building. This site was selected because it contains several features that provided participants hands-on training and exposure to actual operations and conditions affected by the new MS4 permit requirements. These features include new SWPPP regulated activities, outfalls discharging to an on-site stream, vegetated



swales, infiltration basins, catchbasin and manholes, gravel surface parking area, and more.

The program targeted new or inexperienced public works professionals, stormwater coordinators, and other municipal staff responsible for their community's NPDES Phase II Stormwater Permit Minimum Control Measures 3, 4, 5, and 6. The program included classroom presentation, site visits, and hands-on experience on the following MS4 topics:

- Outfall inspections and water quality sampling – safety, tools, protocols, hits
- Mapping stormwater system attributes – paper versus GIS
- Stormwater BMPs and LID – construction, operations, and maintenance
- SWPPPs – site characteristics

### ***Millbury Workshop***

CMRSWC held a second workshop for Coalition members on October 28, 2016 at the Millbury Public Works Facility. The program targeted public works professionals, stormwater coordinators, and other municipal staff responsible for the NPDES Phase II Stormwater Permit Minimum Control Measures 3, 4, 5, and 6.

The MS4 Training Workshop emphasized hands-on training on the following topics:

- IDDE – review of CMRSWC IDDE template and inspection form
- BMPs and LID–BMP retrofits; BMP & LID construction, O&M
- SWPPPs – using CMRSWC template to develop a facility-specific SWPPP

The Workshop included a Vendor Fair with products and services that support MS4 compliance. There were scheduled presentations by Environmental K9 Services, People GIS, and Civil View drone services.

### ***Videos and Templates (Minimum Control Measures 1, 3, 4, 5, 6)***

In addition to the Needham training workshop, the Municipal Stormwater Technical Assistance Contract Grant funded the following stormwater videos, new templates, updates of existing CMRSWC templates, and referenced additional online resources associated with various stormwater management topics to assist regulated communities.

### **Long-Format Stormwater Videos**

- MS4 workshop from June 29, 2016
- Questions, concerns, and contributions from workshop participants
- Stormwater Utility options presented by municipal finance expert Mark Abrahams
- The success of Franklin, MA in considering stormwater BMPs and LID in their public works projects

### **Short-Format Classroom Videos**

- Outfall inspections and water quality sampling – safety, tools, protocols, hits
- Mapping stormwater system attributes – paper versus GIS



- BMPs – construction, operations, and maintenance

- SWPPPs – site characteristics

### **Short-Format Videos Targeting Information on Specific MS4 Requirements**

- Exterior salt and sand storage
- Proprietary systems for stormwater management
- Vegetated swales
- Outfall screening
- Tablet tools
- Stormwater infiltration basins
- Introduction to water quality testing procedures and tools
- Public works facility SWPPPs

Underscoring the value of the videos and templates developed by CMRSWC, in advance of the Millbury Technical Training Workshop participants were asked to review the MS4 training videos on CMRSWC's website. These videos provided background on the permit requirements, which facilitated the field training component of this workshop. CMRSWC MS4 templates were used and referenced for the SWPPP and IDDE program elements.

### **Worcester Polytech Institute Worcester Community Project Center (Minimum Control Measures 1 and 2)**

*From September 27, 2016 Statewide Stormwater Collaborative Minutes: Andrea Briggs of DEP provided a review of WPI Student projects, and an overview of the program. Andrea facilitates the program. In 2012 WPI and DEP approached the CMRSWC to pair students with communities who need assistance. Since that time WPI has created a new center called the Water Research Outreach Center (WROC), which is a Worcester Project Center. They also have a Boston Project Center. There are three ways through WPI that students can help cities and towns. WPI project timeline is structured in 4 quarters. A, B, C and D term. During the A term they prepare to work (e.g. learning the permit); during the B term the students are available full time to the communities. This past summer the student group looked at cost estimates for municipalities and created a permit summary. Andrea showed 5-minute educational video on stormwater and the connection to local resources, which is posted on the town of Holden webpage. WPI students in attendance introduced themselves and the projects they have been working on. Project #1 involves developing a methodology to help communities estimate cost and hopefully to compare to EPA's cost estimators. Project #2 involves developing an education and outreach campaign to educate municipalities and looking to conduct education and outreach to communities. Andrea described how the partnership between the state and WPI has been very beneficial. Holden has had at least 3 projects now.*

WPI students developed a stormwater toolkit featuring an activity book and stickers for children. The activity book includes opportunities for parents to participate and ask questions. The students participated in a craft fair at Union Station in Worcester where they surveyed attendees on logo schemes for their stormwater project branding.

### **Member Needs Survey**

In September 2016, CMRSWC developed a technical needs survey that measured the concerns of member communities with respect to the issuance of the 2016-MS4 General Permit for Stormwater Discharges. The survey also asked members to rank certain programs and tasks that CMRSWC could support to assist members in complying with the MS4 Permit.

Coalition members ranked their needs as follows:

1. Provide Comprehensive Training Programs
2. Continue Standardization of Templates and Forms
3. Provide Web-Based Tools That Support GIS Mapping

Coalition members ranked their compliance concerns as follows:

1. Funding
2. Preparation of NOI and SWMP
3. Designing and Constructing BMP Retrofits
4. Performing Outfall Inspections
5. Performing Outfall Inventory Ranking
6. Developing a Written IDDE Program
7. Meeting TMDL Requirements
8. Developing Written Catchment Investigation Procedures
9. Identifying and Removing Illicit/Illegal Discharges
10. Developing and Maintaining SWPPPs

## **Conclusion**

More than 40 representatives, including CMRSWC members, from MS4 communities participated in the MS4 Workshop in Needham. More than 35 CMRSWC members participated in the Millbury Workshop. The production of 16 videos targeting specific MS4 topics and training opportunities expands the learning opportunities to anyone with access to the web.

The enhanced MS4 templates and information sources on developing IDDE plans, SWPPPs, bylaw review, and LID, which are accessible on the Coalition's website, provide relevant tools to communities implementing their MS4 program with local staff and resources. They are just as relevant to MS4 communities choosing to partner with associations or consultants in the implementation of their MS4 requirements.

CMRSWC members receive ongoing value from the Coalition's workshops, field training, video library, and templates. CMRSWC membership provides consistency to an MS4 constituency subject to routine staff changes, questionable access to funding, and ongoing regulatory demands.