

**Municipality/Organization:** City of Melrose  

---

**EPA NPDES Permit Number:** MA041050  

---

**MassDEP Transmittal Number:** X-270568  

---

**Annual Report Number & Reporting Period:** Year 15  
April 1, 2017 – March 31, 2018  

---

## NPDES PII Small MS4 General Permit Annual Report

### Part I. General Information

Contact Person: Elena Proakis Ellis, P.E., BCEE Title: City Engineer  

---

Telephone #: 781-979-4171 Email: eproakis@cityofmelrose.org  

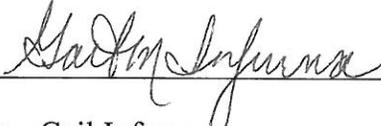
---

Mailing Address: 562 Main Street, Melrose, MA 02176  

---

#### 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: Gail Infurna  

---

Title: Mayor  

---

Date: 4/30/18  

---

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

The City of Melrose has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions upon submission of this permit report.

### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
1-1	Message with water sewer bills on stormwater topic	Department of Public Works	Message distributed with water and sewer bills twice in permit term	Message was distributed in Water/Sewer bills in Year 7. Illicit discharge flyer sent out in bills during Year 4. Messages also distributed in Year 9.	Continue printed messages as needed.
1-2	Select and stock brochures on stormwater topics at various locations in City	Department of Public Works	Brochures selected and stocked in Years 2 through 5	Maintained supply of brochures and restocked as needed. Brochures are available at the Engineering and Public Works Department offices.	Maintain supply of brochures and restock as needed.
1-3	Update City website to include information on stormwater management	Department of Public Works	City website updated to include information on stormwater management issues	The City has developed content through the Mystic River Watershed Stormwater Collaborative through a recently received grant. This includes content tailored specifically for Facebook and Twitter posts.	Update the City’s website, Twitter, and community Facebook page with content generated by the Mystic River Watershed Stormwater Collaborative.
1-4	Staff a booth at the annual Victorian Fair	Department of Public Works	Booth staffed annually starting in Year 2	The DPW had a booth at the Victorian Fair in Year 15. Flyers customized for Melrose were given out with information on pet waste clean-up, car washing, and fertilizer.	Continue to staff booth at Victorian Fair when feasible and discuss stormwater management and pollution prevention.
1-5	Install and maintain signs at athletic fields	Parks Department/School Department/Department of Public Works	Signs installed at athletic fields near Ell Pond by end of Year 1 and inspected annually	Signs have been installed and are being maintained at all City fields and parks.	Continue to maintain signs and install new signs as needed.

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
1-6	Post information on stormwater management issues on local access TV	Department of Public Works	Stormwater information posted and updated on local access cable television channel during periods of non-programming	No stormwater programming was aired in Year 15. The City has developed, with the Mystic River Watershed Stormwater Collaborative, a new informational video.	Send the new video to be aired on the local access cable channel.
1-7	Provide Stormwater information at City’s DPW Day	Department of Public Works	Continue to staff booth at future DPW events	Staffed booth at annual DPW Day. “Dwayne the Storm Drain” coloring book handed out to students annually at DPW Day.	Continue to staff booth at DPW Day and discuss stormwater management and pollution prevention. Continue to distribute Dwayne the Storm Drain as available.

## 2. Public Involvement and Participation

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
2-1	Comply with state public notification laws at MGL Chapter 30A Section 18-25	City Clerk	Notices posted in designated locations	Posted notices announcing upcoming meetings.	Post notices announcing upcoming meetings. This is ongoing throughout the permit term.
2-2	Stencil catch basins with “don’t dump” message	Department of Public Works	25 catch basins stenciled per year, in Years 2 through 5 of the permit	No program to stencil catch basins was carried out in Year 15.	The stenciling program will be continued to the greatest extent possible.
2-3	Assist in clean-up events	Department of Public Works	Assist the Ell Pond Committee on its annual clean-up events	Assisted in Ell Pond annual clean-up and with the Ell Pond Restoration Committee. Assisted in a clean-up of Swains Pond.	Assist in at least one annual clean-up event.

### 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
3-1	Conduct dry weather outfall screening	Department of Public Works	Percent of outfalls screened in Years 1 and 5	Performed dry weather sampling at 4 locations within the drainage system tributary to Ell Pond on July 27, 2017.	Future sampling will be performed as dictated by the forthcoming NPDES permit.
3-2	Map stormwater outfalls	Department of Public Works	Map showing all known stormwater outfalls in Year 1	Stormwater GIS mapping has been updated throughout the year as changes or errors were located in the existing data.	Implement a new protocol for GIS data updates to further data accuracy. Inventory and re-confirm all outfall locations shown in the GIS. Perform additional tasks as required by the new NPDES permit.
3-3	Map stormwater collection system in GIS	Department of Public Works	GIS of stormwater system by end of Year 2	Stormwater GIS mapping has been updated throughout the year as changes or errors were located in the existing data.	Implement a new protocol for GIS data updates to further data accuracy. Perform additional tasks as required by the new NPDES permit.
3-4	Develop and implement a plan to identify and remove non-stormwater discharges to the MS4	Department of Public Works	Number of illicit connections investigated, found and removed	The City performed drainage CCTV inspections and repairs as needed in all areas that were paved. The City, performed samples through the MassDEP ACO noted above. The results do not appear to indicate illicit discharges. The City also performed smoke testing of 90,000 linear feet of sewer line, where drainage was found to be connected to the sewer.	Continue to remove and redirect illicit discharges if they are found. The illicit connections to the sewer will be repaired as part of the City's I-I reduction initiative. Any illicit connections to the drainage system, if discovered, will be removed.
3-5	Strengthen ordinance for access to buildings and requiring redirection of illicit connections	City Solicitor Department of Public Works	Draft ordinance developed and presented to Aldermen	Ordinance approved by Alderman 4/7/08.	Continue to enforce ordinance.

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
3-6	Develop bylaw requiring inspection of new construction for correct connection to sanitary sewer	City Solicitor Department of Public Works	Draft bylaw developed and presented to Aldermen	Ordinance approved by Alderman 4/7/08.	Continue to enforce ordinance.

*Additional:*

3-7	604B Water Quality Planning Grant to study Ell Pond watershed.	Department of Public Works	Investigate and plan BMP strategies for implementation	Final design of rain gardens, associated with 604B project with grant funding received from Massachusetts CZM, was completed.	Open bids, award contract and construct rain gardens project.
-----	--	----------------------------	--	---	---

#### **4. Construction Site Stormwater Runoff Control**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
4-1	Develop a Construction Site Erosion and Sediment Control ordinance for construction sites greater than 1 acre in area	Planning Board Zoning Board of Appeals Department of Public Works Inspection Services	Draft ordinance developed and presented to Aldermen	Ordinance approved by Alderman 4/7/08.	Continue to enforce ordinance.
4-2	Require construction site operators to submit monthly erosion and sediment control inspection reports to the City for sites greater than 1 acre	Department of Public Works Zoning Board of Appeals Inspection Services	Inspection reports submitted to the City	All reviews of proposed new developments going before the Planning Board or Zoning Board of Appeals have been reviewed with regards to the adequacy of both construction and post-construction stormwater quantity and quality considerations.	BMP to continue.

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
4-3	Review site plans for stormwater impacts	Planning Board Department of Public Works Inspection Services	Site plans for construction impacts triggering planning or zoning review are reviewed for erosion and sediment control	Continued following internal protocol for reviewing plans going through the Site Plan Review or Zoning Board of Appeals processes.	Continue development reviews for stormwater impacts.
4-4	Consideration of public input	Department of Public Works Inspection Services	Public review and comment periods held; signs posted at each construction site	Conducted public outreach meetings for various Public Works projects. Any project larger than one acre requires a NPDES Permit. The City maintains communication with residents throughout the duration of projects at hearings and neighborhood meetings.	Hearings and neighborhood meetings to continue as needed on City construction projects.

### 5. Post-Construction Stormwater Management in New Development and Redevelopment

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
5-1	Develop a bylaw to apply standards 2,3,4,7 and 9 for the Massachusetts Stormwater Policy (MSP) to the developments disturbing more than 1 acre throughout City	Planning Board Zoning Board of Appeals Department of Public Works Inspection Services	Draft bylaw developed and presented to Board of Aldermen	Ordinance approved by Alderman 4/7/08.	Continue to enforce ordinance.
5-2	Specify a stormwater BMP manual to be used for consistent design and performance standards	Planning Board Department of Public Works Inspection Services Conservation Commission	BMP manual selected by end of Year 1	The Site Plan Review ordinance references a requirement for consistency with the MassDEP Stormwater Management Policy (Ordinance #235-16.1).	BMP completed and maintained

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
5-3	Develop draft bylaw to ensure long-term maintenance of structural BMPs	Department of Public Works Inspection Services	Draft bylaw developed and presented to Board of Aldermen	Ordinance approved by Alderman 4/7/08.	Continue to enforce ordinance.

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

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
6-1	Employee Training Program	Department of Public Works	Number/percent of Department of Public Works employees who receive stormwater training each year	No stormwater-specific training was conducted in Permit Year 15.	Provide stormwater-related training once per permit term for the three DPW Foremen (water, sewer, and drainage) who oversee DPW employees whose day-to-day activities include maintenance of the stormwater system, street cleaning, snow removal operations, or similar activities.
6-2	Continue street sweeping program	Department of Public Works	During non-winter months, commercial streets swept twice per week, all streets swept twice annually in the spring and fall	Continued street sweeping program, maintained records of schedule and daily volume of residuals collected.	Continue street sweeping program; maintain records of schedule and daily volume of residuals collected.

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
6-3	Storm drain maintenance	Department of Public Works	Percent of catch basins cleaned annually	One third of the City’s catch basins were cleaned. Cleaning was performed in house and with a private vendor. Kept records of residual volumes on a daily basis and prioritized those with the largest for frequent cleaning. Insured proper disposal of residuals. Also cleaned drain pipes as necessary using both in-house and contracted resources.	Clean at least 1/3 of the City’s catch basins. Clean prioritized catch basins and clean drain pipes as necessary. Insure proper disposal of residuals.
6-4	Evaluate street sweeping and catch basin cleaning equipment	Department of Public Works	Evaluation of existing equipment	Evaluated equipment to determine if replacement or upgrades would improve efficiency via weekly maintenance reports. The last purchase was a new vacator truck in 2016, which is frequently used for drain and catch basin cleaning when required.	Evaluate equipment to determine if replacement or upgrades would improve efficiency.
6-5	Roadway deicing	Department of Public Works	Amount and type of deicers used	Continued existing roadway deicing procedures: <ul style="list-style-type: none"> <li>• Used appropriate sand/salt mixture</li> <li>• Calibrated spreaders at beginning of each winter (at least once a year)</li> <li>• Maintained calibration and deicer volume records after each storm</li> <li>• Kept salt stored in an enclosed shed, never outside</li> <li>• Minimized time salt/sand uncovered</li> </ul>	Continue existing roadway deicing procedures. <ul style="list-style-type: none"> <li>• Use appropriate sand/salt mixture</li> <li>• Calibrate spreaders at beginning of each winter</li> <li>• Maintain calibration and deicer volume records</li> <li>• Keep salt stored in an enclosed shed, never outside</li> <li>• Minimize time salt/sand uncovered</li> </ul>

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
6-6	Minimize impacts from vehicle maintenance	Department of Public Works	Training of Department of Public Works employees once per permit term; hazardous material usage tracked	<ul style="list-style-type: none"> <li>• Mechanics have previously been trained in the use and disposal of motor vehicle gasoline and oil, solvents, diesel, etc.</li> <li>• Hazardous materials were properly managed</li> <li>• Hazardous material usage was tracked</li> <li>• All vehicle maintenance was done inside the garage</li> <li>• Annual hazardous waste removal from DPW is performed by a licensed company</li> </ul>	Continue to properly handle and dispose materials used in vehicle maintenance.
6-7	Minimize impacts from vehicle washing	Department of Public Works	Small vehicles washed at commercial car wash, use of biodegradable phosphate free soap, implemented new outdoor vehicle washing procedures.	Instituted the use of biodegradable phosphate free soap in previous permit years. Installed a gas/oil and silt separator at City Yard to catch washing runoff from all vehicles per MA DEP requirements during a previous permit year. The separators have been cleaned annually, and all catch basins on the DPW site are cleaned 2x/year, including in Permit Year 15.	Continue to use biodegradable phosphate free soap, wash small vehicles at commercial car washes. Continue to maintain gas/oil separators at City Yard and clean DPW catch basins.
6-8	Continue tree planting and maintenance program	Department of Public Works	Number of trees planted per year	Planted 85 street trees and maintained all City trees.	Plant a minimum of 75 trees and maintain all City trees.
6-9	Illegal dumping control	Department of Public Works	Signs posted at dead end streets and other possible illegal dumping locations; sites where illegal dumping is identified are cleaned up	Illegal dumping signs were posted during a prior permit term. They are monitored regularly.	If needed, post additional signs at dead end streets and other possible illegal dumping locations. Continue to monitor sites.

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 15</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Upcoming Permit Year</b>
6-10	Household Hazardous Waste Day	Department of Public Works	Household Hazardous Waste Collection Day held annually	Held two Household Hazardous Waste collection days – 6/24/2017 and 10/28/2017 – one of which is held in Stoneham in conjunction with Melrose, and the other in Melrose in conjunction with Stoneham.	Hold two Hazardous Waste Collection Days annually
6-11	City Yard Drainage	Department of Public Works	Maintain appropriate equipment to prevent contamination of drainage at the City Yard	A third in-line stormwater oil/water separator was installed at City Yard as part of new fuel pump system installation in a prior permit year. This separator is cleaned annually, including in Permit Year 15.	Maintain separators.