

**Municipality/Organization:** City of Chelsea, Massachusetts

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**EPA NPDES Permit Number:** MAR041077

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

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## NPDES PII Small MS4 General Permit Annual Report

### Part I. General Information

Contact Person: Bertram Taverna

Title: Director, Chelsea DPW

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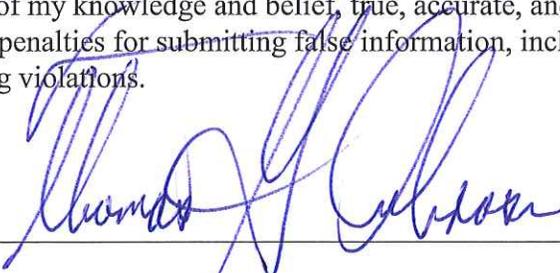
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Email: BTaverna@chelseama.gov

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#### 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: 

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Printed Name: Thomas Ambrosino

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Title: City Manager

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Date:

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

The City of Chelsea has completed the required self-assessment and has determined that our municipality is generally in compliance with the permit conditions:

See Part III for status of BMPs.

During Year 15, the City continued to contract with consultants to accomplish the following:

- Dry and Wet Weather Sampling of Stormwater Outfalls
- Illicit Discharge Detection and Elimination (IDDE) Investigations
- Construction of Storm Drain Projects to Facilitate Sewer Separation and reduce CSO activations

In Year 16, the City will continue to conduct these activities.

**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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
PE-1	Partnership Program w/Chelsea Greenspace & Mystic River Watershed Org.	DPW/Louis V. Mammolette	Conduct Public Forums on a yearly basis.	Attended Meetings of Mystic River Steering Committee Planning Group.	Continued attendance at Mystic River Steering Committee Meetings.
PE-2	Educational Material Distribution	DPW/Louis V. Mammolette	Distribute materials 2x per year at community events	Informational materials maintained on public stand in City Hall Corridor. Stormwater Webpage maintained: <a href="http://www.chelseama.gov/Public_Documents/ChelseaMA_DPW/stormwater">http://www.chelseama.gov/Public_Documents/ChelseaMA_DPW/stormwater</a>	Distribute materials 2x per year at community events
PE-3	Outreach to Latino Community	DPW/Louis V. Mammolette	Develop Spanish Language Brochure within 1 year	N/A.	N/A. Will prepare in conjunction with requirements of 2016 MS4 permit.

**1a. Additions**


**2. Public Involvement and Participation**

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 – Permit Year 16
PP-1	Hold Co-ordination Meetings	DPW/Louis V. Mammolette	Hold Coordination Meetings with Chelsea Greenspace and Mystic River Watershed Organization on a semi-annual basis	Attended Mystic River Steering Committee meeting with various stakeholders from governmental agencies and interested Citizens Groups	Attend Mystic River Steering Committee meetings on a quarterly basis and continue coordination with Mystic River Watershed Association.
Revised					
PP-2	Storm Drain Stenciling	DPW/Louis V. Mammolette	Stencil all catch basin structures within 3 years	Completed in prior permit years.	N/A.
Revised					
PP-3	Volunteer Monitoring	DPW/Louis V. Mammolette	Continue Volunteer Monitoring on an annual basis	Mystic River Watershed Organization continues to monitor water quality of the Mystic River every three months.	Continue with volunteer monitoring program.
Revised					
PP-4	Stakeholder Meetings	DPW/Louis V. Mammolette	Hold annual stakeholder meeting	Attended Mystic River Steering Committee meeting with various stakeholders from governmental agencies and interested Citizens Groups	Continue to attend annual meetings with stakeholders.
Revised					
Revised					
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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
IDDE -1	Storm Drain Map	DPW/Louis V. Mammolette	Update Storm/Sanitary Sewer Map Yearly (ongoing)	The City's storm drain map is updated annually in October.	Continue annual map updates.
IDDE -2	Non-stormwater discharge Ordinance	DPW/Louis V. Mammolette	Adopt Non-stormwater discharge Ordinance within 2 years.	Adopted revised Sewer, Water and Storm Water Ordinances on October 19, 2009. No additional work this period.	Update ordinance as needed to meet requirements of the 2016 MS4 Permit when it is effective.
IDDE -3	Industrial/Business Connections	DPW/Louis V. Mammolette	Establish Monitoring Program within 2 years.	Continued IDDE work this year. 100% of City's outfalls were inspected and sampled this year.	In their 5-year capital plan, the City includes \$125,000 annually for storm water work.
IDDE -4	Illicit Discharge Detection and Elimination	DPW/Louis V. Mammolette	Establish Program within 1 year	Continued IDDE work this year. 100% of City's outfalls were inspected and sampled this year.	In their 5-year capital plan, the City includes \$125,000 annually for storm water work.
Revised					
Revised					
Revised					

#### 3a. Additions


**4. Construction Site Stormwater Runoff Control**

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
CSRC-1	Develop Storm Water Discharge Permitting Standards	DPW/Louis V. Mammolette	Establish Permitting Standards within 1 year	Adopted revised Sewer, Water and Storm Water Ordinances on October 19, 2009. No additional work this period.	Update ordinance as needed to meet requirements of the 2016 MS4 Permit when it is effective.
CSRC-2	Erosion Sediment Control Ordinance	DPW/Louis V. Mammolette	Develop Ordinance within 1 year.	Adopted revised Sewer, Water and Storm Water Ordinances on October 19, 2009. No additional work this period.	Update ordinance as needed to meet requirements of the 2016 MS4 Permit when it is effective.
CSRC-3	Inspection Program Guideline	DPW/Louis V. Mammolette	Establish within 1 year.	Funding for inspection provided in annual Capital Improvement Program.	Continue to fund inspections under annual Capital Improvement Program.
Revised					
Revised					
Revised					

**4a. Additions**


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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
PCRC -1	Post Construction Ordinance	DPW/Louis V. Mammolette	Develop within 1 year.	Adopted revised Sewer, Water and Storm Water Ordinances on October 19, 2009. No additional work this period.	Update ordinance as needed to meet requirements of the 2016 MS4 Permit when it is effective.
PCRC -2	Operation and Maintenance Agreement	DPW/Louis V. Mammolette	Develop within 1 year	Operation & Maintenance Plans required for any new development/redevelopment projects.	Update ordinance as needed to meet O&M requirements of the 2016 MS4 Permit for Post-Construction Stormwater Management once permit is effective.
PCRC -3	Inspection program guidelines	DPW/Louis V. Mammolette	Set up inspection program for post construction runoff controls within 2 years	Funding for inspection provided in annual Capital Improvement Program.	Continue to fund inspection program for post-construction stormwater management under annual Capital Improvement Program.
Revised					
Revised					
Revised					

**5a. Additions**


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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
MGH -1	Street Cleaning Program	DPW/Louis V. Mammolette	Continue ongoing program of sweeping every street twice a month from April 1 to November 30.	Completed; expanded sweeping timeframe to being performed twice a month from March 1st to December 31st.	Continue with current expanded street sweeping program.
MGH -2	Programmed Catch Basin Cleaning	DPW/Louis V. Mammolette	Continue ongoing contracted catch basin cleaning at the rate of 33% of all catch basins per year.	In Permit Year 15, 450 catch basins were cleaned. Total quantity of material removed: 48.38 tons.	Continue to clean 450 catch basins per year or 33% of the City's catch basins in Year 16.
MGH -3	Spill Response & Prevention	DPW/Louis V. Mammolette	Review existing response plan and update within 1 year.	Not completed. Spill Response & Prevention Plan to be updated under 2016 MS4 Permit once permit is effective.	Update Spill Response & Prevention Plan under 2016 MS4 Permit once permit is effective.
Revised					
Revised					
Revised					
Revised					

**6a. Additions**

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**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>**

*There are no approved TMDLs that are applicable to the City of Chelsea. Impaired waters requiring the development of a TMDL that are applicable to Chelsea include Boston Inner Harbor (MA70-02) – impaired for enterococcus, fecal coliform and dissolved oxygen; Chelsea River (MA71-06) impaired for ammonia, fecal coliform, dissolved oxygen, petroleum hydrocarbons and turbidity; Mill Creek (MA71-08) impaired for fecal coliform; and Mystic River (MA71-03) impaired for ammonia, fecal coliform, and foam/flocs/scum/oil slicks. BMPs that Chelsea has been implementing to target these impairments are summarized in the table below.*

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 – Permit Year 16
TMD L-1	Street Sweeping	DPW/Louis V. Mammolette	Continue contracted program of street sweeping every street 2x/month March 1 to December 31	Continued sweeping of streets twice per month from March 1 <sup>st</sup> to December 31 <sup>st</sup> .	Continue program.
Revised					
TMD L-2	Catch Basin Cleaning	DPW/Louis V. Mammolette	Continue contracted program of cleaning 33% of catch basins per year	In Permit Year 15, 450 catch basins were cleaned. Total quantity of material removed: 48.38 tons.	Continue to clean 450 catch basins per year or 33% of the City’s catch basins in Year 16.
Revised					
TMD L-3	Deep Sump Catch Basins	DPW/Louis V. Mammolette	Require new and replacement catch basins to have deep sumps of CSRC-1	All newly installed catch basins for redevelopments and roadway storm drain construction are equipped with deep sumps.	Update as needed in conjunction with permit conditions of 2016 MS4 permit when effective.
Revised					
TMD L-4	Oil and gas separators	DPW/Louis V. Mammolette	Institute requirement in conjunction with CSRC-1	Catch basins at all new developments are required to have oil and gas separators.	Update as needed in conjunction with permit conditions of 2016 MS4 permit when effective.
Revised					

**7a. Additions**

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**7b. WLA Assessment**

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

The following is a listing of information collected (March 2017 – March 2018):

- Annual Dry- and Wet-Weather Stormwater Outfall Sampling: see September 22, 2017 report to EPA by Weston & Sampson.
- Status of IDDE Program: see July 27, 2017 and January 31, 2018 Bi-Annual Progress Reports to EPA by Weston & Sampson.

**Part V. Program Outputs & Accomplishments (OPTIONAL)**

**Programmatic**

Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures	(\$)	

**Education, Involvement, and Training**

Estimated number of residents reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	

**Legal/Regulatory**

	In Place Prior to Phase II	Under Review	Drafted	Adopted
<b>Regulatory Mechanism Status (indicate with "X")</b>				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				X
<b>Accompanying Regulation Status (indicate with "X")</b>				
▪ 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	(#)	25
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	no longer maintained
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified	(#)	
Illicit connections removed	(#) (est. gpd)	
% of population on sewer	(%)	100%
% of population on septic systems	(%)	0%

**Construction**

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

**Post-Development Stormwater Management**

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

**Operations and Maintenance**

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	As needed and every third year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	As needed and every third year
Total number of structures cleaned	(#)	450/year
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	(\$)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	26/yr
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	100/yr
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

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

Anti-/De-Icing products and ratios	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized	(y/n)	Y
Manual control spreaders used	(y/n)	
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	