

Municipality/Organization: City of Lawrence

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EPA NPDES Permit Number: MA 041201

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MassDEP Transmittal Number: W-036114

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

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## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2018)

### Part I. General Information

Contact Person: Brian Pena Title: Commissioner-Water and Sewer

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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: Brian Pena

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Title: Commissioner – Water and Sewer

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Date: 4/25/2018

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## Part II. Self-Assessment

The City of Lawrence has completed the required self-assessment for Permit Year 15 and has determined that our municipality complies with the permit conditions.

During this Permit Year, the City has continued with its efforts to place a significant focus on educating the public about water resource protection. Mayor Rivera issues a bimonthly newsletter, which keeps residents informed of City issues and includes news about ongoing City programs such as street sweeping and yard waste pick-up. Water quality information (e.g. Source Water Assessment and Protection, FOG, SSOs, etc.) is included in the City's annual Drinking Water Quality Report made available to all residents. The Water & Sewer Department continues to update its website <http://www.cityoflawrence.com/water> to increase transparency and accessibility of information.

The City continues to implement several programmatic documents for City staff and contractors to support MS4 General Permit requirements and improve water quality, including:

- Illicit Discharge Detection and Elimination (IDDE) Program Manual
  - Illicit Discharge Monitoring Plan
  - Illicit Discharge Investigation Plan
  - Illicit Discharge Abatement Plan
- Emergency Response Plan for Sanitary Sewer Overflows (SSOs)
- Capacity, Management, Operations, and Maintenance (CMOM) Program Assessment
- Land Development Stormwater Program Manual
- Fats, Oils, and Grease (FOG) Program Manual

The City's IDDE Program gained momentum during Permit Years 13 and 14. In Permit Year 15, it continued to identify and eliminate direct illicit discharges from the MS4. Moving forward, the City will begin to reprioritize its MS4 outfalls and interconnections in accordance with the City's IDDE Program Manual. The City also continues to use an electronic SSO Reporting Tool, allowing for improved tracking and reporting of SSOs that could affect the City's MS4 and water resource areas.

In January 2017, construction of Sewer System Rehabilitation and Improvements – Contract I was completed to address structural and operations and maintenance (O&M) defects prioritized as part of the ongoing sewer system evaluation survey (SSES) investigations. These repairs have improved sewer system functionality and reduced the likelihood of sewer exfiltration (i.e. indirect illicit discharge) into the City's MS4. The City of Lawrence has been aggressively prioritizing these types of infrastructure repairs. In June 2016, design documents were finalized for Contract II and Contract III. Construction for Contract II began in the Spring of 2017 and is expected to be completed in the Fall of 2018. The design for Contract III was revised in the Spring of 2018. Construction work for Contract III has been added as a bid alternate to the Contract IV bid package. Contract IV design is expected to be completed in Spring 2018 and publicly

bid in the Summer of 2018, with construction beginning in the Fall of 2018. Contract V is in the planning phase and will focus on continuing to address sewer system rehabilitation and improvements throughout the city which will continue to benefit the MS4 compliance program.

### 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
1-A Revised	Classroom Education	DPW/Recycling Coordinator	Annual presentation; raise awareness starting with children	<p>Groundwork Lawrence (GWL) has developed various programs including Youth Programs (Green Team Youth Program) that provides education, and community service opportunities to help youths lead local environmental initiatives.</p> <p>GWL also hosts an annual community cleanup event (Earth Day/Comcast Cares Day).</p> <p>The City’s Recycling Coordinator organizes an ongoing school outreach program.</p>	<p>Continue working with local groups to host community cleanup events.</p> <p>Continue to provide school outreach program.</p>
1-B Revised	Educational Displays	DPW/Recycling Coordinator	Raise public awareness	<p>Recycling information is available on the City’s website at <a href="http://www.cityoflawrence.com/recycling-program.aspx">www.cityoflawrence.com/recycling-program.aspx</a>. Printed materials and free recycling stickers are available at the DPW Office (City Hall, Room 201).</p> <p>The City provides an annual Drinking Water Quality Report to its citizens. In addition to drinking water information, the annual report covers related water resource protection topics such as SSOs, water conservation, and FOG control, which all indirectly benefit stormwater quality. The City also works with local non-profit organizations (e.g. GWL) to raise public awareness of water quality issues.</p>	<p>Continue to provide educational information by posting on the City’s website, distributing mailings or disseminating through local or regional organizations.</p>

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
1-C Revised	Newspaper Articles	DPW/Director	Annual article	<p>The Eagle Tribune continues to publish articles regarding water resource management in Lawrence.</p> <p>In August 2016, the City of Lawrence Water and Sewer Department was selected to receive the Utility of the Year Award, issued by the New England Water Works Association. This award recognized the significant improvements the City has made to its water, sewer, and stormwater infrastructure.</p>	Continue to publish articles regarding water resource management.
1-D Revised	Local Cable <i>City Website</i>	<i>IT Dept./Director</i>	Ongoing education	<p>Access to City Council TV is available on YouTube via the City’s website at <a href="http://www.youtube.com/user/LawrenceCityCouncil/videos?flow=grid&amp;live_view=500&amp;sort=dd&amp;view=0">www.youtube.com/user/LawrenceCityCouncil/videos?flow=grid&amp;live_view=500&amp;sort=dd&amp;view=0</a>.</p> <p>Videos of City Council meetings are updated as needed, and include hearings for the Stormwater Management &amp; IDDE Ordinances. The City also maintains Twitter accounts (@COL1853, @Lawrence_H2O).</p>	Continue to update City Council TV YouTube channel with videos of recent meetings; continue to update Twitter & Facebook accounts to reach residents via social media.
1-E Revised	Mailings	DPW/Director	Raise homeowners’ awareness	<p>The Water &amp; Sewer Department mails an annual Drinking Water Quality Report to residents that includes water quality protection information. Annual reports can be found electronically at <a href="http://www.cityoflawrence.com/water">http://www.cityoflawrence.com/water</a>.</p> <p>Mayor Rivera continues to issue a bi-monthly newsletter, which is sent to interested members of the public and made available electronically on the City’s website at <a href="http://www.cityoflawrence.com/the-common-news.aspx">http://www.cityoflawrence.com/the-common-news.aspx</a>.</p>	<p>Continue to include water resource protection information in annual Drinking Water Quality Reports.</p> <p>Continue to issue bi-monthly newsletter to interested citizens.</p>

## 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
2-A Revised	Community Hot Line <i>Inspectional Services</i>	Insp. Services/ Director	Increase public participation	Hidden cameras and increased public input via walk-ins and calls to City Hall have resulted in an increase in enforcement actions related to littering and illegal dumping. An article about the City’s hidden cameras was published in The Valley Patriot and is available online at: <a href="http://valleypatriot.com/hidden-cameras-allow-scofflaws-to-be-identified-penalized-for-dumping-debris/">http://valleypatriot.com/hidden-cameras-allow-scofflaws-to-be-identified-penalized-for-dumping-debris/</a>	Continue to maintain hidden cameras throughout the City.
2-B Revised	Neighborhood Meetings	DPW/Director	Presentation	Neighborhood meetings provide opportunities for public involvement and participation in the implementation of the City’s Stormwater Management Program. In addition to neighborhood association meetings, the City of Lawrence holds community forums during the spring and fall of each year. These forums provide residents the opportunity to discuss issues of importance with the City Council members and Department Executives in an informal setting.  Public notification is done when required by law (e.g. public hearings, abutter notification).	Continue to support and attend neighborhood meetings.

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year15 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-A  Revised	Mapping Outfalls	DPW/Director	Locate illegal discharge	<p>All MS4 outfalls and interconnections have been mapped in geographic information system (GIS).</p> <p>The City has retained a consultant to update and maintain the City’s GIS database. In the fall of 2014, a low altitude aerial survey of the City was completed to gather orthography and key planimetric features (catch basins, manholes, etc.) to improve the existing stormwater system mapping. As part of ongoing illicit discharge fieldwork, drainage connectivity edits continue to be made to the City’s GIS database when discrepancies arise between GIS information and actual conditions.</p>	Continue to update and maintain the City’s GIS database with accurate drainage information.

<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</b>
3-B Revised	Illicit Discharge	Water & Sewer Dept./ Commissioner	Identify origin of illegal discharge	<p>The City continues to implement its IDDE Program, which includes outfall and interconnection screening/sampling and systematic catchment investigations to identify illicit discharges. All MS4 outfalls and interconnections have been screened/sampled during dry and wet weather conditions to identify illicit discharge. Screening results are used to rank outfalls for investigation priority.</p> <p>During Permit Year 15, the City continued IDDE catchment investigations. Building inspections, manhole inspections, dye testing, and closed-circuit television (CCTV) inspections were conducted at approximately 400 locations throughout the MS4 to isolate and verify sources of illicit discharge. Approximately 3,000 linear feet (LF) of stormwater pipe cleaning and CCTV inspections were conducted to attempt to isolate direct illicit connections. The City removed four sources of illicit discharge.</p>	<p>Continue to implement the City’s IDDE Program Manual.</p> <p>Complete systematic catchment investigations of High Priority catchments.</p> <p>Update priority ranking as needed.</p> <p>Reprioritize outfalls and interconnections for dry-weather and wet-weather screening at the end of the five-year term as needed.</p>
3-C Revised	Ordinance Development	City Council	Reduce illegal dumping	<p>The City Council voted to implement an IDDE Ordinance in March 17, 2015, prohibiting non-stormwater discharge into the City’s MS4. The City continues to develop stormwater regulations to support implementation of the IDDE Ordinance.</p>	<p>Develop stormwater regulations to support implementation of IDDE Ordinance.</p>

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-A  Revised	Site Plan Review	Engineering Dept./City Engineer	Site runoff control	<p>The City continues to implement its Land Development Stormwater Program Manual, which includes site plan review and construction site inspections.</p> <p>The City has retained an engineering consultant to conduct construction site inspections and maintain a database to track inspection results. Construction sites permitted under EPA’s Construction General Permit (CGP) continue to be inspected within the first three weeks of construction for erosion and sediment controls and site stabilization measures. Four construction site inspections were conducted during Permit Year 15.</p>	Continue to implement the City’s Land Development Stormwater Program Manual.
4-B  Revised	Runoff Ordinance	City Council	Reduce site runoff	The City Council voted to implement a Stormwater and Erosion Control Ordinance in March 17, 2015, requiring certain developers to obtain a Stormwater Management Permit from the City. The City continues to develop stormwater regulations to support implementation of the Stormwater and Erosion Control Ordinance.	Develop stormwater regulations to support implementation of Stormwater and Erosion Control Ordinance.

## 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</b>
5-A Revised	Design Standards	Engineering Dept./City Engineer	Decrease site runoff	As part of the City’s Land Development Stormwater Program Manual and Stormwater and Erosion Control Ordinance, the City requires developers to meet Massachusetts Stormwater Handbook design standards and associated long-term operations and maintenance obligations for stormwater management systems.	Continue to require developers to meet Massachusetts Stormwater Handbook design standards.
5-B Revised	Final Site Inspection	Insp. Services/ Director	Compliance with design	<p>The City’s Land Development Stormwater Program Manual and Stormwater and Erosion Control Ordinance requires developers to develop long-term operations and maintenance (O&amp;M) plans to ensure stormwater management systems function as designed.</p> <p>The City has retained an engineering consultant to conduct final inspections of post-construction stormwater Best Management Practices (BMPs) to document whether final conditions agree with site plan.</p>	<p>Continue to require developers to prepare long-term O&amp;M plans.</p> <p>Continue to conduct final inspections of post-construction stormwater BMPs as needed.</p>

## 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</b>
6-A Revised	Employee Training	DPW/Director	Educate employees and improve housekeeping	New employees are trained in the proper handling and disposal of hazardous materials. Additional employee training is conducted on an as-needed basis.	Continue to train employees and focus specifically on stormwater pollution prevention, IDDE, and other stormwater topics.  The City has scheduled an IDDE Employee Training in April 2018 presented by the City's engineering consultant.
6-B Revised	Catch Basin Cleaning	DPW/Director	Improve sediment control	City crews conduct catch basin cleaning daily as time allows, except during the winter months.	Continue to conduct catch basin cleaning on a regular basis.
6-C Revised	Street Sweeping	DPW/Director	Remove potential pollutants and reduce load to system	City crews sweep streets daily as time allows, except during the winter months.	Continue to sweep streets on a regular basis.

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

The Massachusetts Year 2016 Integrated List of Waters (updated every two years) lists the Merrimack River and Spicket River as Category 5 impaired waterways and the Shawsheen River as a Category 4a impaired waterway., The Shawsheen River Basin has an approved Bacteria total maximum daily load (TMDL). The City will continue to address the discharge of pollutants to these impaired waterways with the efforts described above. Catchments that discharge directly to the Shawsheen River Basin have been prioritized for systematic illicit discharge investigations to reduce the discharge of fecal coliform.

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

Results of MS4 outfall and interconnection dry- and wet-weather sampling have been incorporated into the City's IDDE Program Manual, and are available for review upon request at the Water and Sewer Department (City Hall, Room 204).