

Municipality/Organization: Medford
EPA NPDES Permit Number: MA041049
MassDEP Transmittal Number: W228064
Annual Report Number Year 14
& Reporting Period: April 1, 2016 – March 31, 2017

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2017)

Part I. General Information

Contact Person: Mr. Brian Kerins **Title:** Interim Commissioner of Public Works

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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: 

Printed Name: Brian Kerins

Title: Commissioner of Public Works

Date: May 1, 2017

Part II. Self-Assessment

During the 2016-2017 permit year, the City of Medford continued implementation of the tasks outlined in the 5-Year Plan under the 2003 NPDES Small Municipal Separate Storm Sewer Systems (MS4) permit. Numerous BMPs were attained prior to this period and have been continued, including updating stormwater related information on the City's website and making it available in the DPW office, hazardous and yard waste collection activities, maintaining signs, and holding public meetings in which stormwater related activities are discussed. In addition, the City continues to follow good housekeeping and pollution prevention procedures with street sweeping, catch basin cleaning, and other municipal operations.

2016-2017 Accomplishments:

The City's Stormwater System Ordinance continues to be in effect. The City is working on towards finalizing the Stormwater Rules and Regulations, including work on construction and post-construction BMPs.

Illicit connection investigations continued through this permit year. Sewer TV inspections in Main St / Winter Brook identified sewer exfiltrating into the underdrain. The design for the sewer main rehabilitation is almost complete. The sewer rehabilitation project in North Medford is in the third year, including replacement and/or lining of sewer mains resulting in I/I removal. The bid documents for the catch basin disconnection from the sewer in North Medford are complete, another project that will achieve inflow removal.

The City collaborated with the MyWRA on a Coastal Zone Management grant to identify publicly-owned sites that are good candidates for construction of stormwater BMPs that would benefit the water quality of the Mystic River and, ultimately, the harbor.

Public education informational posters are on display at City Hall, High School and River's Edge development. The City's stormwater webpage <http://www.medfordma.org/departments/energy-and-environment/storm-water-management/> and the webpage <http://medfordenergy.org/gogreen/storm-water-specific/> are maintained.

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 14	Planned Activities for Subsequent Years
1A	Recycling/household hazardous waste information on website.	DPW	Update website throughout year.	Website was updated with new links and the collection dates for the 2016/2017 permit year. Information about the new recycling/trash program is included on the website. http://www.medfordma.org/departments/recycling/	Continue to update website with event dates.
1B	Recycling/household hazardous waste information on pamphlet in DPW Office.	DPW	Make pamphlet available daily in the DPW Office.	Pamphlet is available in the DPW Office and on the City's website. http://www.medfordma.org/departments/recycling/	Continue to display pamphlet in DPW Office.
1C	Recycling/household hazardous waste information on pamphlet to be mailed.	DPW	Mail pamphlet to 75% of residents.	Measure Complete. Information available on City website http://www.medfordma.org/departments/recycling/	Continue to update recycling and hazardous waste information on website.
1D	Bilingual Education Information	DPW, High School translator	Translate recycling pamphlet into Spanish and make available in DPW office	Recycling information is available on City of Medford website. http://www.medfordma.org/departments/recycling/	Continue to display pamphlet in DPW Office and on website.
1E	Arbor Day Celebration	DPW, Tree Warden	One talk will be given to one school per year.	Activities included tree pruning and new trees planting.	Include stormwater information in an event related to Arbor Day or Earth Day.
1F	"No Dumping Allowed" Signs	DPW, Parks Department	Existing signs in parks.	Existing signs were maintained.	Existing signs will be maintained.
1G	"No Dogs or Animals Allowed" Signs	DPW, Parks Department	Existing signs in parks.	Existing signs were maintained.	Existing signs will be maintained.
1H	"Do not feed the Geese" Signs	DPW, Board of Health	Design and install one sign at Wright's Pond.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. "Do not feed the Geese" signs, procedures, and fines will be determined during this review.	Design and install "Do not feed the Geese" signs. Establish fines in upcoming year as Rules and Regulations are finalized.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
1I	“No Littering” signs	DPW, Parks	Design and Install “No Littering” signs in Permit	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. “No Littering” signs, procedures, and fines will be determined during this review.	Design and install “No Littering” signs. Establish fines in upcoming year as Rules and Regulations are finalized.
1J	“No Household Trash” signs	DPW, Parks	Install City owned barrels that read “No household Trash”	Stormwater Rules and Regulations have been drafted. “No Household Trash” signs, procedures, and fines will be determined during this review.	Design and install “No Household Trash” signs. Establish fines in upcoming year as Rules and Regulations are finalized.
1K	Geese Dropping Article in Newspaper	DPW, Environmental Agent	Place one article in the paper Years 1, 3, and 5.	None required.	Completed.
1L	Pet Waste Article in Newspaper	DPW, Environmental Agent	Place one article in the paper Years 1, 3 and 4	None required. Pet waste information is also available on the City’s website at: http://www.medfordma.org/departments/energy-and-environment/storm-water-management/ In addition, Medford implemented a targeted Public Education Campaign.	Completed.
1M	Stormwater Video on Local Cable Channel	DPW, Local Cable Access Staff	City will buy a stormwater educational video and play on a regular basis the third year.	None required. Stormwater pollution information is also available on the City’s website at: http://www.medfordma.org/departments/energy-and-environment/storm-water-management/ In addition, Medford implemented a targeted Public Education Campaign.	Play stormwater video on Public Access channel once per year.
1O	Publicize fines for littering, illegal dumping and failure to pick up pet waste in newspaper	DPW, Stormwater Advisory Committee	Publish fines in paper when Ordinances are approved and established.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Signs, procedures, and fines will be determined during this review. In addition, Medford implemented a targeted Public Education Campaign.	Establish and publicize fines in upcoming year as Rules and Regulations are finalized. Implement new Public Education Campaign.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
Revised		DPW, Stormwater Board			
1P	Educate Local Businesses	DPW, Environmental Agent	Distribute flyers to 75% of businesses in the third year.	None required.	Invite City Businesses to annual meetings.
1Q	Assess stormwater information at existing City Events.	DPW	Assess one existing City event for opportunities to include stormwater information.	Provided stormwater information at City Hall. Regular Conservation Commission meetings are held at City Hall and are open to the public. Stormwater issues are routinely discussed at these meetings. In addition, Medford implemented a targeted Public Education Campaign.	Continue to provide stormwater information at City Hall and for local events and implement new Public Education Campaign.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
2A	Oil-Based Paint Collection at DPW Yard	DPW, Recycling	DPW to accept Latex/oil-based paint from residents at DPW Yard once a month between May and October.	Residents were able to bring latex and oil-based paint to the DPW Yard (see Part V).	DPW will continue to collect these materials at the DPW Yard.
2B	Hazardous Waste Drop-off in Lexington	DPW, Recycling	Advertise the hazardous waste drop-off in Lexington in mailer and daily in DPW office as a pamphlet.	Advertised this service in the recycling/HHW pamphlet and on the City website. Medford relies on the Town of Lexington to collect these materials at the Minuteman Hazardous Household Products Facility.	Continue to advertise this service.
2C	Curbside recycling	DPW, Recycling	Weekly pick up of recyclables once every two weeks year-round.	Recyclables picked up every other week (see Part V).	Continue to provide this service.
2D	Mercury Exchange	DPW, Recycling, Board of Health	DPW to accept mercury at the DPW Yard once/month May-October.	Residents were allowed to drop off mercury products at the DPW Yard on specified days.	Continue to provide this service.
2E	Nickel-Cadmium Recycling	DPW, Recycling	DPW to accept rechargeable nickel-cadmium batteries in the DPW office.	Residents were allowed to drop off batteries at the DPW office daily during regular office hours.	Continue to provide this service.
2F	Leaf and yard waste collection	DPW, Recycling	DPW to collect leaf and yard waste every other week curbside from May to November.	DPW collected leaf and yard waste every other week April through November (see Part V). Schedule posted on website.	Continue to provide this service.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
2G	Mystic River Cleanup	Friends of the Mystic River, MyWRA, DPW	DPW to collect trash volunteers pick up at the Mystic River Clean up Day.	"Mystic Community Earth Day" events included clean-up along the River at Condon Shell Park, Flynn Ring and MacDonald Park, trail clearings and plantings.	Continue to provide cleanup and disposal services for Mystic River Watershed Events.
2H	Public Meetings/Notification	DPW	Hold one public meeting to present stormwater program progress.	Targeted Public Education Campaign	
2I	Stormwater Contact to receive and address public complaints or concerns	DPW	Establish a Stormwater Contact	Stormwater contact established, (Alicia Hunt, Energy and Environment Dept., 781-293-2137) identified at public meetings, in newspaper, and on website.	Continue to expand publicity for this contact through newspaper, etc.
2J	Earth Day Activity	DPW – Energy and Environment Department	Include a stormwater activity in Earth Day Events	No stormwater activities included in Earth Day events. Mystic Community Earth Day included clean-up, trail clearings and plantings along the Mystic River.	Continue to include stormwater activity/information at Earth Day and Clean Energy Events organized by the City. Evaluate new opportunities for including stormwater outreach at these events.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
3A	Fines for Illegal Dumping	DPW	Establish fines for illegal dumping.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Signs, procedures, and fines will be determined during this review.	Establish and publicize fines in upcoming year as Rules and Regulations are finalized.
3B	Enforcement of Fines for Littering and Pet Waste	Police	More stringent enforcement of Fines for Littering and Pet Waste	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Signs, procedures, and fines will be determined during this review.	Establish and publicize fines in upcoming year as Rules and Regulations are finalized. Implement stringent enforcement program with Police.
3C	Expand storm sewer map to include all outfalls.	DPW, Engineering	Finish mapping by Year 5.	The City of Medford finalized the stormwater GIS mapping in 2011.	Continue to update stormwater system in GIS, as needed.
3D	Illicit Discharge Ordinance	DPW, Engineering, Building, Law	Float new Ordinance, one year of comment period, continue education.	Measure completed.	Measure completed.
3E	Detection and Elimination Plan	DPW, Engineering	Trace the Source of the Illicit Discharges.	On-going IDDE work in accordance with the City's IDDE Plan and the Clean Water Act Administrative Order issued by the EPA in August 2009. Detailed compliance reports were submitted to the EPA in July 2016 and January 2017 regarding IDDE work. Manholes were inspected, buildings dye tested. Sewer exfiltration to underdrain identified in Mains St/ Winter Brook. A table summarizing IDDE investigations is included in Appendix A to this report.	Complete work according to IDDE Plan implementation schedule.
3F	Illicit Discharge Education for Public	DPW, Engineering	Included in Measure 1	Included In Measure 1	Included In Measure 1
3G	Illicit Discharge Education for Municipal Employees	DPW	Included in Measure 6	Staff received updates as needed.	Continue to update staff on IDDE Program goals, procedures, and status.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
4A	Erosion and Sediment Control Ordinance “Construction Ordinance”	DPW, Engineering, Building, Legal	Float new Ordinance, one year of comment period, continue education.	Measure completed.	Measure completed.
4B	Erosion and Sediment Control BMPs/ Requirements	DPW, Engineering, Building, Legal	Prepare Draft requirements to be referenced or incorporated into the Construction Ordinance.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Erosion and sediment control BMPs and requirements will be established during the review process.	Finalize Erosion and Sediment Control BMPs/Requirements in upcoming year as Rules and Regulations are finalized.
4C	Construction Site Plan Review Procedures	DPW, Engineering, Building, Legal	Prepare draft Construction Site Plan Review Procedure to be included or referenced in Ordinance.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Construction site plan review procedures will be established during the review process.	Finalize Construction Site Plan Review Procedures in upcoming year as Rules and Regulations are finalized.
4D	Construction Site Inspection and Enforcement Procedures	DPW, Engineering, Building, Legal	Prepare draft Site Inspection and Enforcement Procedure to be included or referenced in Ordinance.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Inspection and Enforcement procedures for construction sites will be established during the review process.	Finalize Site Inspection and Enforcement Procedures in upcoming year as Rules and Regulations are finalized.
4E	Stormwater Contact to receive and address public complaints or concerns	DPW	Expand publicity regarding stormwater contact (paper, etc.)	Stormwater contact has been established: Alicia Hunt, 781-293-2137. Contact information has been provided at public meetings, on website, and in articles published in the Medford newspaper.	Update and maintain contact information on website and distributed pamphlets.
4F	Minimum BMPs to Consider and thresholds	Stormwater Advisory Committee	Finalize City’s decision on thresholds and minimum BMP requirements and include information in Draft Ordinances.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Thresholds and minimum BMP requirements will be established during the review process.	Finalize thresholds and minimum BMP requirements in upcoming year as Rules and Regulations are finalized.

Revised		DPW, Engineering, Stormwater Board			
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5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) Permit Year 14	Planned Activities for Subsequent Years
5A	Encouragement of “Better Site Design”	DPW, Engineering, Building, Law	Formal document on better site design by the end of Year 5	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Better site design practices will be established during the review process.	Finalize better site design practices in upcoming year as Rules and Regulations are finalized.
5B	Post-Construction Runoff Ordinance	DPW, Engineering, Building, Law	Float new ordinance, one year of comment period, continue education.	Measure completed.	Measure completed.
5C	Choose Structural and Non-Structural BMPs	DPW, Engineering	Prepare final procedures.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Procedures for choosing structural and non-structural BMPs will be established during the review process.	Finalize procedures for choosing structural and non-structural BMPs in upcoming year as Rules and Regulations are finalized.
5E	Procedures for Implementation of Structural BMPs	DPW, Engineering	Prepare final procedures.	Stormwater Rules and Regulations have been drafted and are under review by the Stormwater Board. Procedures for the implementation of structural BMPs will be established during the review process.	Finalize structural BMPs implementation procedures in upcoming year as Rules and Regulations are finalized.

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 14	Planned Activities for Subsequent Years
6A	Regular Street Sweeping	DPW, Highway	Sweep main Streets year-round; Sweep all streets and municipal lots twice per year.	DPW swept all streets twice (spring and fall) and swept main streets weekly throughout the year.	Continue existing sweeping schedule.
6B	Regular Catch Basin Cleaning	DPW, Highway	Cleaned catch basins once per year as stated in the revisions for the 2003/2004 Annual Report.	3,400 catch basins cleaned. 2,314 linear feet of drain pipes were cleaned.	Continue cleaning catch basins annually. Developing targeted informational mailing for the neighborhoods associated with problematic catch basins.
6D	Employee Training	DPW, Engineering	Continue existing training; determine necessary personnel and topics; schedule training.	Employee training updates to employees as needed.	Continue annual training.
6E	Municipal O&M	DPW, Highway, Parks, Engineering	Develop Draft BMPs for Pollution Source Reduction/Elimination from Municipal Activities including waste disposal procedures.	DPW continues to follow BMPs for municipal O&M	Continue implementation of BMPs for pollution reduction/elimination from municipal activities.
6H	Geese Maintenance Contract	DPW, Engineering	Reduce permanent geese populations near water bodies.	Geese maintenance contract was not continued.	Continue discouraging geese; evaluate effectiveness of geese maintenance program.

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

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 – for Subsequent Years
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

The City of Medford keeps records of operation and maintenance activities, such as catch basin cleaning and street sweeping. A summary of these records for the reporting period between April 1, 2016 and March 31, 2017 is below. See Appendix B for list of sewer and drain repairs.

- The City collected 646 tons of street sweepings. The sweepings were hauled away by contractor W. L. French. The cost of the collection and disposal was \$24,409.
- Waste Management collected 1,799 tons of residential yard waste. The cost of disposal was \$39/ton, total cost of residential yard waste collection and disposal was \$70,161.
- The City's contractor RJ Gabriel cleaned 3,400 catch basins. The clean-up cost, including disposal costs, was \$35/catch basin, total \$119,000.
- The City repaired, replaced or installed 31 catch basins, 7 drain manholes, and 7 sewer manholes. In addition, 20 sewer manholes were grouted.
2,314 linear feet of drain and 38,879 linear feet of sewer were cleaned and inspected.
340 linear feet of drain were installed.
1,982 linear feet of sewer main and 852 linear feet of sewer service pipe were replaced or installed.

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, 2015 through March 31, 2016)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures **	(\$)	\$520,000 (est.)
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	Not Known
Stormwater management committee established	(y/n)	Yes. Stormwater Board
Stream teams established or supported	(# or y/n)	Yes – supported
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	None – no event this year
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	No

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in 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	(%)	100
Estimated or actual number of outfalls	(#)	111
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	95
▪ CADD	(%)	80 (est.)
▪ GIS	(%)	100
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	111 (92%)
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	19
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	13, est. 3,675 gpd
% of population on sewer	(%)	>99
% of population on septic systems	(%)	<1

Construction

	(Preferred Units)	Response
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	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	No
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)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	3,400
Qty. of storm drain cleaned **	(%, LF or mi.)	2,314 feet
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Basin Cleaning Costs		
<ul style="list-style-type: none"> Annual budget/expenditure (labor & equipment)** 	(\$)	\$119,000 contract
<ul style="list-style-type: none"> Hourly or per basin contract rate ** 	(\$/hr or \$ per basin)	\$35 / basin

• Disposal cost**	(\$)	Included in contract cleaning cost
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	2
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	~29
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	In house
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	No
• % 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: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	

▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	No

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	NaCl and sand only. Percent varies by storm requirements.
Pre-wetting techniques utilized **	(y/n or %)	No
Manual control spreaders used **	(y/n or %)	Yes
Zero-velocity spreaders used **	(y/n or %)	No
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	0
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	0
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	0

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	

Appendix A:
Illicit Discharge Detection and Elimination Summary
Table

Illicit Discharge Detection & Elimination Summary Table for Year 14

Item	Total
Outfalls Inspected (dry weather)	3
Outfalls Sampled (dry weather)	0
Manholes Inspected	35
Manholes Sampled	0
Catch Basins Inspected	15
Catch Basins Sampled	0
Buildings Dye-tested	2
Drainage Structures Dye-tested	0
Closed-circuit Television Inspection (LF)	Drain: 2,314 Sanitary Sewer: 38,879
Illicit Discharges Identified	0
Illicit Discharges Removed	0
Estimated Amount of Illicit Flow Removed (gpd)	0

Appendix B:
Pollution Prevention and Good Housekeeping in
Municipal Operations

2016-2017 Sewer and Storm Drain Repairs

**City of Medford, Massachusetts
2016-2017 Storm Drain and Sewer Repairs**

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System	Date	Location	Company	Field Work Completed	Length of Pipe (linear feet)	Size of Pipe	Illicit Discharge Removed	Comments
Drain	4/20/2016	512 High St	City Forces	Rebuilt CB				
Drain	4/20/2016	Brewster Rd	InSite	Installed drain main	220	12", 15"		
Drain	4/20/2016	Brewster Rd	InSite	Installed DMH, CBs	8			
Drain	9/30/2016	Woodside, Whitney, Whittier, X-country	Rapid Flow	Clean & CCTV	30" - 127', 36" - 15'	30', 36"		
Drain	10/29/2016	609 Boston Ave	City	Rebuilt CB				
Drain	10/29/2016	643 Boston Ave	City	Repaired CB				
Drain	10/31/2016	49 Almont St	City	Rebuilt CB				
Drain	11/1/2016	Lawrence Rd. - MH1730 - MH1750	Rapid Flow	Clean & CCTV	272'	24"		
Drain	11/2/2016	Surrey St. -MH1011 - MH 2176	Rapid Flow	Clean & CCTV	42'	24"		
Drain	11/2/2016	Surrey St - MH1012 - MH 1010	Rapid Flow	Clean & CCTV	245'	15"		
Drain	11/2/2016	Surrey St - MH1012 - MH 1013	Rapid Flow	Clean & CCTV	167'	21"		
Drain	11/2/2016	Surrey St - MH1011 - MH 1010	Rapid Flow	Clean & CCTV	12'	15"		
Drain	11/2/2016	Surrey St - MH1010 - CB 1010	Rapid Flow	Clean & CCTV	29'	12"		
Drain	11/2/2016	Surrey St - MH1012 - CB 1012C	Rapid Flow	Clean & CCTV	58'	12"		
Drain	11/3/2016	Surrey St - MH1014 - MH1013	Rapid Flow	Clean & CCTV	37'	8"		
Drain	11/3/2016	Surrey St - MH1014 - CB1014	Rapid Flow	Clean & CCTV	17'	8"		
Drain	11/3/2016	Surrey St - MH1015 - CB1014	Rapid Flow	Clean & CCTV	24'	8"		
Drain	11/3/2016	Surrey St - MH1015 - CB1015	Rapid Flow	Clean & CCTV	5'	6"		
Drain	11/3/2016	Surrey St. - CB1015 - MH1014	Rapid Flow	Clean & CCTV	4'	6"		
Drain	11/3/2016	Surrey St - MH1013 - CB1013	Rapid Flow	Clean & CCTV	20'	10"		
Drain	11/5/2016	Playstead Rd at Century St Ext	City	Rebuilt CB				
Drain	11/5/2016	Playstead Rd at Roberts Rd	City	Rebuilt CB				
Drain	11/7/2016	First St.-MH1280 - MH1285	Rapid Flow	Clean & CCTV	723'	12"		
Drain	11/7/2016	First St.-MH1280 - CB1280A,B,C	Rapid Flow	Clean & CCTV	10" - 26', 12" - 52'	10", 12"		
Drain	11/7/2016	First St.-MH1282 - CB1282A,B	Rapid Flow	Clean & CCTV	28'	8"		
Drain	11/7/2016	First St.-MH1283 - CB1283A,B	Rapid Flow	Clean & CCTV	31'	8"		
Drain	11/7/2016	First St.-MH1285 - CB1285	Rapid Flow	Clean & CCTV	16'	8"		
Drain	11/12/2016	161 Playstead Rd	City	Rebuilt CB				
Drain	11/12/2016	Playstead Rd, Cemetery Entrance	City	2 CBs Repaired				
Drain	11/17/2016	Governors Ave at island	City	Rebuilt CB				
Drain	11/17/2016	Governors Ave at Hospital	City	Rebuilt CB				
Drain	11/17/2016	Summit Rd at Cedar Rd North	City	Rebuilt CB				
Drain	11/17/2016	Cleveland S at Clematis Rd	City	Repaired CB				
Drain	12/3/2016	150 Arlington St	City	Repaired CB				
Drain	12/3/2016	42 Foss St	City	Rebuilt CB				
Drain	12/7/2016	Willis Ave	D & R	Rebuild catch basins 2396A, B & 2388A				
Drain	12/8/2016	Governors Ave	D & R	Rebuild catch basin 1715A				
Drain	12/10/2016	52 Cleveland St	City	Rebuilt CB				
Drain	12/22/2016	Lawrence Rd. - MH1730 - MH1734	D'Allessandro	Replace drain	24" - 105', 12" - 7'	12", 24"		

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System	Date	Location	Company	Field Work Completed	Length of Pipe (linear feet)	Size of Pipe	Illicit Discharge Removed	Comments
Drain	1/5/2017	Haines St at Gaston Rd	City	Replaced 10" drain, rebuilt CB	6	10"		
Drain	1/21/2017	Medford High School	City	Rebuilt 3 CBs				
Drain	1/21/2017	Lawrence Rd at Governors Ave	City	Repaired CB				
Drain	1/28/2017	79 Governors Ave	City	Repaired CB				
Drain	1/28/2017	20 Daly Rd	City	Rebuilt CB				
Drain	2/25/2017	St. Clements at Warner	City	Replaced pipe section, repaired CB	2	10"		
Drain	2/25/2017	Police Station 101 Main St	City	Repaired DMH				
Drain	2/25/2017	Jerome St at Arlington St	City	Repaired DMH				
Drain	3/17/2017	William St. - DMH 2564 to 2560 to 2560A	Rapid Flow	Clean & CCTV	364	12"		
Drain	3/22/2017	Playstead Park	City	Repaired DMH				
Sewer	4/1/2016	Benmor St	Rapid Flow	Clean & CCTV	360	12"		
Sewer	4/1/2016	Benmor St	Rapid Flow	Clean & CCTV	156	10"		
Sewer	4/1/2016	Webster St	Rapid Flow	Clean & CCTV	98	12"		
Sewer	4/1/2016	Fellsway West	Rapid Flow	Clean & CCTV	702	6"		
Sewer	4/1/2016	Clematis Road	D'Allessandro	Replaced main between N-113- N-117	450	8"		
Sewer	4/1/2016	Clematis Road	D'Allessandro	Replaced sewer services	200	6"		
Sewer	4/1/2016	Clematis Road	D'Allessandro	Replaced MH N-114				
Sewer	4/19/2016	Webster St	D'Allessandro	Spot Repair between O-115 - O-116	35'	12"		
Sewer	4/22/2016	73 Windsor Rd	City Forces	Replaced sewer service section	9	6"		
Sewer	4/25/2016	133 George St	City Forces	Replaced sewer service section	6	6"		
Sewer	4/25/2016	Gaston Street	D'Allessandro	Replaced Sewer N-140 - N-141	165'	12"		
Sewer	4/26/2016	Gaston Street	D'Allessandro	Replace sewer services N-140 - N-141	80'	6"		
Sewer	4/29/2016	Gaston St.	D'Allessandro	Replaced Sewer N-132 - N-133	160'	8"		
Sewer	5/2/2016	Gaston Street	D'Allessandro	Replace sewer services N-140 - N-141	80'	6"		
Sewer	5/3/2016	Gaston Street	D'Allessandro	Spot Repair between N-135A - N-138	21'	12"		
Sewer	5/4/2016	Fern Rd.	D'Allessandro	Spot Repair between L-012A - L-012	25'	8"		
Sewer	5/5/2016	261 Fellsway West	City Forces	Replaced sewer service section	22	6"		
Sewer	5/7/2016	61 Saltonstall Rd	City Forces	Replaced sewer service section	9	6"		
Sewer	5/14/2016	128 Saunders St	City Forces	Replaced sewer service section	9	6"		
Sewer	6/14/2016	100 Jerome St	City Forces	Replaced sewer service section	10	6"		
Sewer	7/21/2016	201 Boston Ave	City Forces	Replaced sewer service section	16	6"		
Sewer	8/6/2016	10 Quincy St	City Forces	Replaced sewer service section	4	6"		
Sewer	8/12/2016	24 Linden St	City Forces	Replaced sewer service section	13	6"		
Sewer	8/29/2016	Boston Ave. - A039 - A055	Rapid Flow	Clean & CCTV	781'	8"		
Sewer	8/30/2016	Grove St. - S039 - S013	Rapid Flow	Clean & CCTV	832'	8"		
Sewer	8/30/2016	High St. - S013 - S012	Rapid Flow	Clean & CCTV	8" - 25', 10" - 129'	8", 10"		
Sewer	8/30/2016	Boston Ave. - A057 - A055	Rapid Flow	Clean & CCTV	580'	8"		
Sewer	8/31/2016	Boston Ave - S002 - S012	Rapid Flow	Clean & CCTV	10" - 846', 12" - 1341'	10", 12"		

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Sewer	9/1/2016	Cabot Rd. - G025 - G025A	Rapid Flow	Clean & CCTV	278'	10"		
Sewer	9/1/2016	Rivers Edge Dr. - G025 - G021	Rapid Flow	Clean & CCTV	386'	10"		
Sewer	9/1/2016	Craddock Ave	Rapid Flow	Clean & CCTV	1130'	18"		
Sewer	9/2/2016	Burget Ave. - D138 - D137	Rapid Flow	Clean & CCTV	408'	8"		
Sewer	9/2/2016	Hume Ave. - D138 - D140	Rapid Flow	Clean & CCTV	441'	8"		
Sewer	9/2/2016	Sunset Ave. -	Rapid Flow	Clean & CCTV	606'	8"		
Sewer	9/6/2016	Fellsway West - N280 - N018	Rapid Flow	Clean & CCTV	1030'	8"		
Sewer	9/7/2016	Tucker St - N060 - N061	Rapid Flow	Clean & CCTV	155'	8"		
Sewer	9/7/2016	Tucker St - N241A - N241O	Rapid Flow	Clean & CCTV	8" - 275', 12" - 50'	8", 12"		
Sewer	9/7/2016	Highland Ave. N060A(B?) - N059	Rapid Flow	Clean & CCTV	415'	8"		
Sewer	9/7/2016	Highland Ave. - N059 - N062	Rapid Flow	Clean & CCTV	40'	8"		
Sewer	9/7/2016	Highland Ave. - N062 - N240	Rapid Flow	Clean & CCTV	168'	12"		
Sewer	9/7/2016	Waddell St. N240 - N382	Rapid Flow	Clean & CCTV	73	8"		
Sewer	9/7/2016	Benmor St. - N062 - N063	Rapid Flow	Clean & CCTV	133'	12"		
Sewer	9/7/2016	Highland Ave. N2419(E) - N221M	Rapid Flow	Clean & CCTV	311'	8"		
Sewer	9/8/2016	Maurice St. - N241G - N241Y	Rapid Flow	Clean & CCTV	1006'	8"		
Sewer	9/8/2016	Victor St. - N2419(E) - N241i	Rapid Flow	Clean & CCTV	356'	8"		
Sewer	9/8/2016	Prescott St - Q065 - Q064	Rapid Flow	Clean & CCTV	167'	8"		
Sewer	9/9/2016	107 Boston Ave	D'Allessandro	Replace sewer service	20'	6"		
Sewer	9/9/2016	39 Stearns Ave.	D'Allessandro	Replace sewer service	20	6"		
Sewer	9/12/2016	8-10 Curtis St	City Forces	Replaced sewer service section	4	6"		
Sewer	9/12/2016	Main St. (from Dexter St to Liberty Ave)	NWMCC	Clean & CCTV	1130	8"		
Sewer	9/13/2016	Bow St (from Dexter to Albion)	NWMCC	Clean & CCTV	936	8"		
Sewer	9/13/2016	Albion St (from Medford St to Bow St)	NWMCC	Clean & CCTV	300	8"		
Sewer	9/28/2016	Morrison St. - N-119 - N-119	D'Allessandro	Replace sewer & services	8" - 286', 6" - 108'			
Sewer	10/1/2016	Doonan St. - SMH N089A	NWMCC	Build Invert		8"		
Sewer	10/1/2016	Doonan St. - SMH N090	NWMCC	Build Invert		8"		
Sewer	10/5/2016	Rockwell Ave. - F036 - F038	Rapid Flow	Clean & CCTV	527'	8"		
Sewer	10/5/2016	Cummings St. - F034 - F040	Rapid Flow	Clean & CCTV	525'	8"		
Sewer	10/5/2016	Linden St. - F014 - F016	Rapid Flow	Clean & CCTV	638'	8"		
Sewer	10/6/2016	Barnard Rd. - R131 - R140	Rapid Flow	Clean & CCTV	394'	8"		
Sewer	10/6/2016	Brooks St. - R129 - R149	Rapid Flow	Clean & CCTV	257'	8"		
Sewer	10/6/2016	Woburn St - R131 - R130	Rapid Flow	Clean & CCTV	308'	8"		
Sewer	10/6/2016	Woburn St - P224B - P294	Rapid Flow	Clean & CCTV	662'	8"		
Sewer	10/6/2016	Chandler Rd. - P224 - P224A	Rapid Flow	Clean & CCTV	182'	8"		
Sewer	10/7/2016	Woburn St. - R156 - R129	Rapid Flow	Clean & CCTV	1314'	8"		
Sewer	10/7/2016	Woburn St. - R092 - R015	Rapid Flow	Clean & CCTV	280'	8"		
Sewer	10/7/2016	Osborne Rd. - R015 - R058A	Rapid Flow	Clean & CCTV	184'	10"		
Sewer	10/8/2016	42 Hancock St	City Forces	Replaced sewer service section	10	6"		

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Sewer	10/11/2016	Grover Rd. - SMH K097	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/11/2016	Lund Rd. - SMH K119	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/11/2016	Oak Rd. - SMH L067	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/11/2016	Hickory Ave. - SMH L060A	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/11/2016	Mystic St. - R133 - R136	Rapid Flow	Clean & CCTV	311'	8"		
Sewer	10/11/2016	Mystic St. Ext. - R133 - R137	Rapid Flow	Clean & CCTV	60'	6"		
Sewer	10/11/2016	Woburn St. - R134 - R131	Rapid Flow	Clean & CCTV	6" - 125', 8" - 372'	6", 8"		
Sewer	10/11/2016	Woods Edge Rd. - R133 - R138	Rapid Flow	Clean & CCTV	181'	8"		
Sewer	10/11/2016	Corrinne Rd. - R163 - R161	Rapid Flow	Clean & CCTV	202'	8"		
Sewer	10/12/2016	Lookout Rd. - SMH L072	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/12/2016	McCormack Ave. - SMH L037	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/12/2016	McCormack Ave. - SMH L034	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/13/2016	McCormack Ave. - SMH L038	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/13/2016	Winslow Ave. - SMH L362	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/13/2016	Doonan St. - SMH L096	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/13/2016	Playstead Rd - R008 - R019	Rapid Flow	Clean & CCTV	8" - 616', 10" - 1511'	8", 10"		
Sewer	10/14/2016	Doonan St. - SMH L089A	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/14/2016	Doonan St. - SMH L090	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/14/2016	Playstead Rd - R008 - R184	Rapid Flow	Clean & CCTV	1380'	15"		
Sewer	10/17/2016	Doonan St. - SMH L091	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/17/2016	Doonan St. - SMH L094	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/18/2016	Gaston St - SMH133	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/18/2016	Gaston St - SMH135A	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/19/2016	Gaston St - SMH138	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/19/2016	Gaston St - SMH142	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/19/2016	Fellsway West - SMH N017	NWMCC	Grout & Epoxy Seal		12"		
Sewer	10/19/2016	326 Mystic Ave	City Forces	Replaced sewer service section	5	6"		
Sewer	10/20/2016	Playstead Rd. - R114 - R108	Rapid Flow	Clean & CCTV	77'	10"		
Sewer	10/20/2016	Playstead Rd. - R113 - R196	Rapid Flow	Clean & CCTV	264'	8"		
Sewer	10/20/2016	Playstead Rd. - R114 - R117	Rapid Flow	Clean & CCTV	998'	10"		
Sewer	10/21/2016	Fellsway West - SMH N280	NWMCC	Grout & Epoxy Seal		8"		
Sewer	10/21/2016	Winthrop St. R026 - R024	Rapid Flow	Clean & CCTV	541'	8"		
Sewer	10/21/2016	Winthrop St. R206 - R050	Rapid Flow	Clean & CCTV	709'	8"		
Sewer	11/1/2016	Winthrop St. - R020 - R019	Rapid Flow	Clean & CCTV	258'	8"		
Sewer	11/1/2016	Surrey St. - J017 - J023	Rapid Flow	Clean & CCTV	325'	8"		
Sewer	11/2/2016	Surrey St. - J017 - J023	Rapid Flow	Clean & CCTV	365'	8"		
Sewer	11/3/2016	Fullbright St. D361 - D358A	Rapid Flow	Clean & CCTV	515'	8"		
Sewer	11/5/2016	85 Park Ave	City Forces	Replaced sewer service section	8	6"		
Sewer	11/7/2016	First St.- H020 - H021	Rapid Flow	Clean & CCTV	208'	8"		

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Sewer	11/12/2016	Playstead Rd, Cemetery Entrance	City	Repaired SMH				
Sewer	11/12/2016	155 Jerome St	City Forces	Replaced sewer service section	12	6"		
Sewer	11/14/2016	Rita Dr. - N-430 - N431	D'Allessandro	Replace sewer & services	8" - 296', 6" - 102'	6", 8"		
Sewer	11/17/2016	Prescott St - Q066 - Q069A	Rapid Flow	Clean & CCTV	509'	8"		
Sewer	11/17/2016	Wolcott St. - Q072 - Q070	Rapid Flow	Clean & CCTV	451'	8"		
Sewer	11/17/2016	Wolcott Park - Q069A - Q074A	Rapid Flow	Clean & CCTV	230'	8"		
Sewer	11/17/2016	Austin Rd. - P232C - Q070	Rapid Flow	Clean & CCTV	286'	8"		
Sewer	11/18/2016	Grover Rd. - K304 - K098	D'Allessandro	Replace sewer	140'	8"		
Sewer	11/21/2016	Prescott St - Q062 - Q060	Rapid Flow	Clean & CCTV	267'	8"		
Sewer	11/21/2016	Austin Rd. - P232C - P232	Rapid Flow	Clean & CCTV	198'	8"		
Sewer	11/21/2016	Rock Hill St. - P234 - P233	Rapid Flow	Clean & CCTV	6" - 98', 8" - 124'	6", 8"		
Sewer	11/21/2016	Hastings Lane - P233 - P231	Rapid Flow	Clean & CCTV	312'	8"		
Sewer	11/21/2016	High St. - P232 - P219	Rapid Flow	Clean & CCTV	6" - 275', 8" - 55'	6", 8"		
Sewer	11/30/2016	Fells Ave. - K073 - K072	D'Allessandro	Replace sewer & services	8" - 136', 6" - 35'	6", 8"		
Sewer	12/8/2016	29 Pinkham Rd	City Forces	Replaced sewer service section	22	6"		
Sewer	12/10/2016	111 Surrey St	City Forces	Replaced sewer service section	9	6"		
Sewer	12/15/2016	375 Fellsway West	City Forces	Replaced sewer service section	5	6"		
Sewer	12/15/2016	Fells Ave. - K075 - K074	D'Allessandro	Replace sewer & services	8" - 228', 6" - 34'			
Sewer	1/19/2017	104 Cedar Rd North	City	Repaired SMH				
Sewer	1/19/2017	46 Ellsworth St	City	Repaired SMH				
Sewer	1/28/2017	Fullbright St	City	Rebuilt SMH				
Sewer	2/22/2017	35 Cleveland St	City	Repaired SMH				
Sewer	2/22/2017	48 Cleveland St	City	Repaired SMH				
Sewer	2/23/2017	Governors Ave - O-190 to O-180	Rapid Flow	Clean & CCTV	83	8"		
Sewer	2/23/2017	Governors Ave - O-180 to O-180A	Rapid Flow	Clean & CCTV	165	8"		
Sewer	2/23/2017	Governors Ave - O-180A to O-180B	Rapid Flow	Clean & CCTV	102	8"		
Sewer	2/23/2017	Governors Ave SMH O-287 to O-311 to O-286	Rapid Flow	Clean & CCTV	508	8"		
Sewer	2/23/2017	Governors Ave SMH O-196 to O-190	Rapid Flow	Clean & CCTV	711	8"		
Sewer	2/27/2017	Governors Ave SMH O-190 to O-180	Rapid Flow	Clean & CCTV	265	8"		
Sewer	2/27/2017	Columbia Rd SMH D-248 to D-250	Rapid Flow	Clean & CCTV	467	8"		
Sewer	2/28/2017	Salem St. - MH K-151 - K - 150	D'Allessandro	4 point repairs to sewer	40'	8"		
Sewer	2/28/2017	Salem St. - MH K-151 - K - 150	D'Allessandro	4 point repairs to sewer	40'	8"		
Sewer	2/28/2017	Salem St. - MH K-152 to MH-151	Rapid Flow	Clean & CCTV	250	8"		
Sewer	2/28/2017	Salem St. - MH K-151 to MH-150	Rapid Flow	Clean & CCTV	166	8"		
Sewer	2/28/2017	Valley Park St SMH Q-095 to Q-096	Rapid Flow	Clean & CCTV	115	8"		
Sewer	2/28/2017	Sylvia Rd SMH D-252 to D-250	Rapid Flow	Clean & CCTV	398	8"		
Sewer	2/28/2017	Columbia Rd SMH D-248 to D-022	Rapid Flow	Clean & CCTV	183	8"		
Sewer	3/2/2017	Spring St SMH K-016 to K-015	Rapid Flow	Clean & CCTV	281	15"		
Sewer	3/6/2017	Spring St SMH K-020 to K-016	Rapid Flow	Clean & CCTV	694	15"		
Sewer	3/7/2017	Spring St SMH K-015 to K-014	Rapid Flow	Clean & CCTV	287	15"		

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Sewer	3/9/2017	Salem St. - MH K-150 to K-021	Rapid Flow	Clean & CCTV	168	8"		
Sewer	3/9/2017	Salem St. - MH K-022 to K-021	Rapid Flow	Clean & CCTV	230	12"		
Sewer	3/9/2017	Salem St - SMH K-153 to K-152	Rapid Flow	Clean & CCTV	247	8"		
Sewer	3/10/2017	Lambert St SMH K-155 to K-151	Rapid Flow	Clean & CCTV	95	8"		
Sewer	3/10/2017	Lambert St SMH K-158 to K-150	Rapid Flow	Clean & CCTV	119	8"		
Sewer	3/10/2017	Salem St - SMH K-021 to K-020	Rapid Flow	Clean & CCTV	115	12"		
Sewer	3/20/2017	William St. - SMH A-164A to A-163	Rapid Flow	Clean & CCTV	202	6"		
Sewer	3/20/2017	Boston Ave - SMH A-054 to A-038	Rapid Flow	Clean & CCTV	290	8"		

CCTV (closed circuit TV): pipe was cleaned and televised