



Haverhill

Robert Ward Deputy DPW Director
Water/Wastewater Division
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April 29, 2015

Water Technical Unit (OES04-3)
U.S. EPA - New England, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912
Attn: Joy Hilton

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Resource Protection
205B Lowell Street
Wilmington, MA 01887
Attn: Nihar Mohanty

Subject: City of Haverhill, MA NPDES Permit # **MA 0101621**
Combined Sewer Overflow Annual Report 2014

Dear Ms. Hilton and Mr. Mohanty:

In accordance with Part I.D.3. the City of Haverhill's NPDES Permit, we are providing this status report for the 2014 calendar year. Please note that throughout this report the items in *italics* are the requirements taken directly from the NPDES permit followed by the response.

- a. Activation frequency and discharge volume for each CSO during the previous calendar year. The report shall include this information for each of the CSO discharge outfalls listed on attachment F.*

The SWMM model approved in 1998 and updated in August 2011 by Administrative Order 08-012, was used to report the CSO discharge volumes.

The City's consultant CDM Smith and sub-contractor Flow Assessment has installed CSO Flow meters throughout the City's collection system. Flow Assessment provides necessary maintenance on all CSO flow meters throughout the year. These flow meters are accessible through the internet with user ID and passwords.

Each flow meter is queried to obtain 5-minute records, exported to Excel, and remove all non-reporting times. Every CSO meter is recorded in this manner and has its own separate tab in Excel. CSO volumes are created for each CSO Flow meter recording, see **Appendix A CSO FLOW METER SUMMARY 2014**.

Appendix B CSO FLOW METER SUMMARY PER OUTFALL 2014 was developed utilizing the data from Appendix A that totals each outfall.

Rain data is collected at the City of Haverhill Wastewater Treatment Plant using a RainWise, Inc., rain gage. The rain is measured in 15-minute intervals to within 0.01 inches. NetStorm utilizes the rain gauge information and develops rainfall statistics per storm event. See **APPENDIX C: CALENDAR YEAR 2014 RAINFALL DATA** utilizing NetStorm. (Note some storm duration last longer than one day for an example 5-29-14 lasted for 43 hours). The City received 45.29 inches of rainfall for calendar year 2014. The average rainfall amount is 42.91 inches.

- b. A certification, which states that the previous calendar's year's monthly inspections were conducted, results recorded, and records maintained.*

I certify that the City of Haverhill inspects and maintains pertinent electronic records contain within the City's CMMS MaintStar Program for all CSOs at least monthly.

The City stopped its block checking program in July 2014, and notified EPA through an email. Block checks that were done can be observed in **APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS**.

- c. A summary of modifications to the approved NMC programs which have been evaluated, and a description of those, which will be implemented during the upcoming year.*

The City of Haverhill minimizes CSO discharges to the maximum extent possible through implementation of the Draft Nine Minimum Controls report submitted to EPA in September 1996. The Phase II LTCP identified several CSO regulators that will be modified (raising weirs) to further minimize CSO discharges.

Table 1 below represents all CSOs that were closed and all CSOs weirs that were raised along with the date of the work. This was recommended in the Table 6-1 and 6-2 from the previous submitted CSO LTCP August 2011.

	CLOSED DATE	Old Weir Elev.	New Weir Elev.	Amount Raised (ft)	NPDES #	Amount Raised (ft)	Date Raised	Finial Elev.
HAVERHILL SIDE								
LOWER SIPHON CSO								
BATES	7/24/2013	9.4	9.4	0	001			
BOARDMAN	8/14/2013	9.3	9.3	0	010			
LOWER SIPHON		1	1	0	013	3	6/26/2014	4
FIRE STATION	8/7/2013	13.5	13.5	0	016			
MAIN ST NORTH		19.3	19.3	0	019			
Bethany Avenue					040			
Chestnut Street					041			
MIDDLE SIPHON CSO								
LITTLE RIVER NORTH 12- INCH		9.25	11.77	2.52	021D			
LITTLE RIVER SOUTH 18- INCH		9	9.8	0.8	021E	2.08	3/19/2014	11.08
Center Barrell Locke Street)		12.92	12.92	0	021F	1.17	3/11/2014	14.09
MIDDLE SIPHON		6.2	7.7	1.5	021A			
Emerson Street					021B			
Essex Street Eliminated					021C			
WINTER ST		27.02	27.02	0	21H			
BROADWAY DIVERSIONAL		35.77	35.77	0	038			
HIGH ST DIVERSIONAL		28.32	28.32	0	038			
WINTER AND HALE		17.9	18.6	0	21H			
UPPER SIPHON CSO								
RAILROAD BRIDGE	3/31/2012	26.4	26.4	0	022			
266 RIVER STREET	8/14/2013	15	15	0	023			
BEACH STREET	3/19/2014	15.5	15.5	0	025			
UPPER SIPHON		9.65	11.32	1.67	024	2.25	6/23/2014	11.9
BRADFORD SIDE								
FRONT STREET	7/10/2013	14.25	15.58	1.33	031			
BRADFORD AVE		11	12.75	1.75	032	4.99	6/25/2014	15.99
SOUTH PROSPECT	7/19/2013	11.48	12	0.52	033			
South Webster Street					039			
Colby Street Regulator					039			
MIDDLESEX STREET		6.48	8.56	2.08	034			
MAIN ST SOUTH	7/31/2013	8.21	10.38	2.17	035			
FERRY STREET	8/5/2013	5.75	8	2.25	036			

In the first annual report submitted in accordance with this permit, the permittee shall submit a public notification plan to describe the measures actively being taken to meet NMC #9 (see NMC #9 in part I.C.1a.i.8), and an evaluation of future measures to enhance the public notification program, including the following:

- i. *Outfall sign visible from both water and land.*

Signs have been installed at each CSO location in the City and will be maintained over the coming year. See **Appendix E: Work Order 41209** verifying that all CSO signage is posted. Please note that CSO signage is removed for any CSOs that were permanently closed in 2013. The closed CSOs are Bates (#001), Boardman (#010), Fire Station (#016), Railroad Bridge (022), 266 River Street (023), Front Street (031), South Prospect (033), Main St. South (035), and Ferry Street (036). Beach Street (#025) was closed in 2014.

- ii. *Sign/Notices are where people may be using CSO-impacted waters for recreation such as swimming, boating, fishing, and places where the public may gain access to the water (e.g. boat put-in areas). The notice would include information on health risk posed by CSO and links for additional information on CSOs and water quality.*

Within 24-hours of a CSO occurrence an email notification is sent to Downstream Communities see **APPENDIX F: DOWNSTREAM COMMUNITIES** for the email notification list.

The City's Public Notification Program, (required by the NMC), consists of public education about CSO discharges and their impacts. "Real-Time" notification of the receiving water impacts or use restrictions during the activation of the CSO discharge is not feasible (due to its transient and intermittent occurrences). Accordingly, the City relies on a general education program and the City's official web site to keep the public aware of the possible health risks.

The address below is the City's CSO web site:

http://www.ci.haverhill.ma.us/departments/public_works_department/water_wastewater/wastewater/wastewater_collection_system/combined_sewer_overflows_%28cso%29/index.php

- iii. *Review of the sewer system model to determine the threshold rain events, which normally will cause overflows.*

The City has compiled all block check results and plotted these results with available Supervisory Control and Data Acquisition (SCADA) influent flows along with available rainfall data from 2008 through 2010; found that when the City receives 0.10 inches of rain the City could expect a CSO occurrence. However, due to the City's effort to close ten (10) CSOs and raise the weirs of five (5) CSOs data is not yet available to accurately report the minimum rain level creates CSO activations.

- i. *Quarterly postings on the permittee's website and links to other relevant web-sites which would give the locations of the CSOs, and associated health risks and estimate of CSO activations and volumes. The permittee shall update the CSO website within two (2) months of the effective date of the permit.*

The City of Haverhill's official CSO web site is

http://www.ci.haverhill.ma.us/departments/public_works_department/water_wastewater/wastewater/wastewater_collection_system/combined_sewer_overflows_%28cso%29/index.php

- i. *Annual press release and notification to interested individuals and groups on the progress of the CSO abatement work, also noting contacts for additional information on CSOs and water quality.*

The City contacts downstream communities for each CSO activation. When other interested individuals are identified, this notification will be sent to them.

- ii. *Notice to local health agents and other downstream public officials, including drinking water treatment plants (where appropriate), shellfish wardens, harbor masters, and the Massachusetts Division of Marine Fisheries (via FAX at 617-727-3337) or via telephone (978-282-0308 extension 160) within 24 hours of activation of CSOs. The permittee shall also notify the Massachusetts Divisions of Marine Fisheries by the same method if the treatment plant discharges effluent without disinfection. When City of Haverhill staff is unavailable to confirm an actual discharge from a CSO during a significant precipitation event, the permittee shall report the probable occurrence of a CSO discharge in the same manner. Subsequently, the occurrence of the CSO discharge event shall be confirmed or dispelled as staff becomes available. The planned notice distribution contact list shall be provided to EPA and DEP.*

The public notification plan shall include a schedule for implementation of enhanced public notice measures.

APPENDIX F: DOWNSTREAM COMMUNITIES represents the list of the current email addresses notified for Calendar 2014.

If you require additional information, please call me at 978-374-2382.

Sincerely,

Robert Ward, Deputy DPW Director
Water/Wastewater

cc: Mike Stankovich, DPW Director
Paul Jessel, Collection System Supervisor
Fred Haffty WWTP Facility Manager
James Drake, CDM

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessment							
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
021F	Middle Barrel Radio Market	3/20/2014 1:00	3/20/2014 4:00	115,055	3.00	0.57	0.19	5.75	0.10
Storm Total				115,055					
039	South Webster Street		3/30/2014 0:00	25,962					
034	Middlesex Street		3/30/2014 6:45	2,104	0.08	3.46	0.37	43.50	0.08
021A	Middle Siphon	3/30/2014 5:45	3/30/2014 7:15	88,647	1.50	3.46	0.37	43.50	0.08
021D	Locke Street South (12-inch siphon)	3/30/2014 2:45	3/30/2014 18:15	15,886	15.50	3.46	0.37	43.50	0.08
021F	Middle Barrel Radio Market	3/30/2014 2:30	3/30/2014 22:45	1,659,917	20.50	3.46	0.37	43.50	0.08
Storm Total				1,792,515					
021D	Locke Street South (12-inch siphon)	3/31/2014 0:00	3/31/2014 1:45	12,574	1.75	3.46	0.37	43.50	0.08
034	Middlesex Street	3/31/2014 2:15	3/31/2014 3:00	64,152	0.75	3.46	0.37	43.50	0.08
039	South Webster Street	3/31/2014 1:30	3/31/2014 3:30	25,393	2.00	3.46	0.37	43.50	0.08
021A	Middle Siphon	3/31/2014 1:45	3/31/2014 4:15	1,060,424	2.50	3.46	0.37	43.50	0.08
021F	Middle Barrel Radio Market	3/31/2014 0:15	3/31/2014 12:15	1,180,816	12.00	3.46	0.37	43.50	0.08
Storm Total				2,343,359					
021F	Middle Barrel Radio Market		4/5/2014 2:30	7,626	0.08	0.41	0.11	7.25	0.06
Storm Total				7,626					
021F	Middle Barrel Radio Market		4/8/2014 6:30	1,514	0.08	0.58	0.19	5.75	0.10
Storm Total				1,514					
021F	Middle Barrel Radio Market	4/15/2014 22:15	4/15/2014 22:30	8,677	0.25	0.74	0.15	15.25	0.05
Storm Total				8,677					
021D	Locke Street South (12-inch siphon)	4/23/2014 9:30	4/23/2014 11:30	9,302	2.00	0.57	0.25	3.25	0.18
032	Bradford Avenue	4/23/2014 9:15	4/23/2014 11:45	135,300	2.50	0.57	0.25	3.25	0.18
021F	Middle Barrel Radio Market	4/23/2014 9:30	4/23/2014 12:00	147,992	2.30	0.57	0.25	3.25	0.18
Storm Total				292,594					
021E	Locke Street South (18-inch siphon)	4/24/2014 10:45	4/24/2014 11:15	2,583	0.50	0.86	0.01	15.25	0.06
Storm Total				2,583					
021D	Locke Street South (12-inch siphon)		5/1/2014 21:15	5,032	0.08	0.86	0.01	15.25	0.06
041	Chestnut Street		5/1/2014 21:15	24,908	0.08	0.86	0.01	15.25	0.06
021F	Middle Barrel Radio Market	5/1/2014 4:30	5/1/2014 21:30	77,872	17.00	0.86	0.01	15.25	0.06
032	Bradford Avenue	5/1/2014 6:15	5/1/2014 21:30	62,181	15.25	0.86	0.01	15.25	0.06
Storm Total				169,994					
021F	Middle Barrel Radio Market	5/16/2014 19:45	5/16/2014 20:00	9,031	0.25	0.21	0.13	6.50	0.03
032	Bradford Avenue	5/16/2014 19:45	5/16/2014 20:00	16,009	0.25	0.21	0.13	6.50	0.03
Storm Total				25,040					
021G	Winter street		5/17/2014 0:00	3,825	0.08	0.57	0.31	2.75	0.21
040	Bethany Avenue		5/17/2014 0:00	23,830	0.08	0.57	0.31	2.75	0.21
021A	Middle Siphon		5/17/2014 6:00	383	0.08	0.57	0.31	2.75	0.21
034	Middlesex Street		5/17/2014 6:00	33,689	0.08	0.57	0.31	2.75	0.21
041	Chestnut Street		5/17/2014 6:00	76,083	0.08	0.57	0.31	2.75	0.21
021D	Locke Street South (12-inch siphon)	5/17/2014 4:30	5/17/2014 6:15	26,560	1.75	0.57	0.31	2.75	0.21
021H	Winter and Hale	5/17/2014 4:30	5/17/2014 6:15	34,317	1.75	0.57	0.31	2.75	0.21
039	South Webster Street	5/17/2014 6:00	5/17/2014 6:15	11,281	0.25	0.57	0.31	2.75	0.21
024	Upper siphon	5/17/2014 6:00	5/17/2014 6:30	177,547	0.50	0.57	0.31	2.75	0.21
032	Bradford Avenue	5/17/2014 4:30	5/17/2014 6:45	223,682	2.25	0.57	0.31	2.75	0.21
021F	Middle Barrel Radio Market	5/17/2014 4:30	5/17/2014 7:00	214,485	2.50	0.57	0.31	2.75	0.21
013	Lower Siphon	5/17/2014 6:15	5/17/2014 8:00	292,158	1.75	0.57	0.31	2.75	0.21
Storm Total				1,117,840					
021F	Middle Barrel Radio Market	5/27/2014 19:15	5/27/2014 19:30	7,706	0.25	0.52	0.17	15.25	0.03
Storm Total				7,706					
021D	Locke Street South (12-inch siphon)		5/28/2014 8:00	356	0.25	0.52	0.17	15.25	0.03
021F	Middle Barrel Radio Market	5/28/2014 8:00	5/28/2014 8:15	18,754	0.25	0.52	0.17	15.25	0.03
032	Bradford Avenue	5/28/2014 8:00	5/28/2014 8:15	38,320	0.25	0.52	0.17	15.25	0.03
Storm Total				57,430					

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessment								
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	
021F	Middle Barrel Radio Market		6/5/2014 14:45	5,135	0.08	0.41	0.10	9.50	0.04	
Storm Total				5,135						
021G	Winter street		6/13/2014 0:00	20,252	0.08					
021A	Middle Siphon	6/13/2014 10:20	6/13/2014 10:30	5,228	0.17	0.57	0.31	2.75	0.21	
034	Middlesex Street	6/13/2014 10:10	6/13/2014 10:30	58,364	0.33	0.70	0.20	15.25	0.05	
040	Bethany Avenue	6/13/2014 10:10	6/13/2014 10:30	37,869	0.33	0.70	0.20	15.25	0.05	
041	Chestnut Street	6/13/2014 10:15	6/13/2014 10:30	55,311	0.25	0.70	0.20	15.25	0.05	
032	Bradford Avenue	6/13/2014 10:10	6/13/2014 10:35	193,969	0.42	0.70	0.20	15.25	0.05	
039	South Webster Street	6/13/2014 10:20	6/13/2014 10:35	18,146	0.25	0.70	0.20	15.25	0.05	
021H	Winter and Hale	6/13/2014 10:15	6/13/2014 10:40	74,294	0.42	0.70	0.20	15.25	0.05	
024	Upper siphon	6/13/2014 10:20	6/13/2014 10:40	287,731	0.33	0.70	0.20	15.25	0.05	
021F	Middle Barrel Radio Market	6/13/2014 10:15	6/13/2014 10:55	157,718	0.67	0.70	0.20	15.25	0.05	
021D	Locke Street South (12-inch siphon)	6/13/2014 10:05	6/13/2014 11:00	39,537	0.92	0.70	0.20	15.25	0.05	
013	Lower Siphon	6/13/2014 10:40	6/13/2014 12:10	266,310	1.50	0.70	0.20	15.25	0.05	
Storm Total				1,214,729						
040	Bethany Avenue		6/26/2014 1:25	2,774	0.08	0.49	0.25	4.75	0.10	
041	Chestnut Street		6/26/2014 1:25	737	0.08	0.49	0.25	4.75	0.10	
021F	Middle Barrel Radio Market	6/26/2014 1:30	6/26/2014 2:10	71,091	0.67	0.49	0.25	4.75	0.10	
039	South Webster Street	6/26/2014 1:40	6/26/2014 3:50	4,288	2.17	0.49	0.25	4.75	0.10	
021D	Locke Street South (12-inch siphon)	6/26/2014 1:20	6/26/2014 5:30	346,011	4.17	0.49	0.25	4.75	0.10	
Storm Total				424,901						
021G	Winter street	7/3/2014 22:15	7/3/2014 22:15	34,375	0.08	0.72	0.32	7.00	0.10	
034	Middlesex Street	7/3/2014 16:45	7/3/2014 22:20	75,717	5.58	0.72	0.32	7.00	0.10	
040	Bethany Avenue	7/3/2014 16:45	7/3/2014 22:20	66,532	5.58	0.72	0.32	7.00	0.10	
041	Chestnut Street	7/3/2014 16:45	7/3/2014 22:20	21,346	5.58	0.72	0.32	7.00	0.10	
021A	Middle Siphon	7/3/2014 22:15	7/3/2014 22:25	61,193	0.17	0.72	0.32	7.00	0.10	
024	Upper siphon	7/3/2014 22:20	7/3/2014 22:25	27,464	0.08	0.72	0.32	7.00	0.10	
021H	Winter and Hale	7/3/2014 17:00	7/3/2014 22:30	104,500	5.50	0.72	0.32	7.00	0.10	
039	South Webster Street	7/3/2014 16:50	7/3/2014 22:30	9,264	5.67	0.72	0.32	7.00	0.10	
021F	Middle Barrel Radio Market	7/3/2014 16:55	7/3/2014 22:40	169,816	5.75	0.72	0.32	7.00	0.10	
021D	Locke Street South (12-inch siphon)	7/3/2014 16:45	7/3/2014 22:45	76,472	6.00	0.72	0.32	7.00	0.10	
Storm Total				646,679						

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessment								
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	
040	Bethany Avenue		7/4/2014 20:00	2,687	0.08	1.70	0.08	19.25	0.09	
021F	Middle Barrel Radio Market	7/4/2014 17:20	7/4/2014 22:25	60,033	5.08	1.70	0.08	19.25	0.09	
021D	Locke Street South (12-inch siphon)	7/4/2014 15:15	7/4/2014 23:25	71,134	8.17	1.70	0.08	19.25	0.09	
Storm Total				133,854						
021D	Locke Street South (12-inch siphon)		7/5/2014 1:30	522	0.08	1.70	0.08	19.25	0.09	
021D	Locke Street South (12-inch siphon)	7/5/2014 5:35	7/5/2014 5:40	522	0.08	1.70	0.08	19.25	0.09	
Storm Total				1,044						
021D	Locke Street South (12-inch siphon)	7/9/2014 22:55	7/9/2014 23:00	1,658	0.08	0.13	0.12	0.50	0.26	
038	High Street		7/15/2014 15:50	6,972	0.08	1.21	0.74	7.75	0.16	
021B	Emerson Street	7/15/2014 15:50	7/15/2014 15:55	22,105	0.08	1.21	0.74	7.75	0.16	
021G	Winter street	7/15/2014 15:50	7/15/2014 16:10	215,563	0.33	1.21	0.74	7.75	0.16	
040	Bethany Avenue	7/15/2014 15:45	7/15/2014 16:10	169,937	0.42	1.21	0.74	7.75	0.16	
041	Chestnut Street	7/15/2014 15:45	7/15/2014 16:10	49,386	0.42	1.21	0.74	7.75	0.16	
021E	Locke Street South (12-inch siphon)	7/15/2014 16:15	7/15/2014 16:20	2,895	0.08	1.21	0.74	7.75	0.16	
021H	Winter and Hale	7/15/2014 15:50	7/15/2014 16:20	303,154	0.50	1.21	0.74	7.75	0.16	
032	Bradford Avenue	7/15/2014 15:50	7/15/2014 16:20	437,803	0.50	1.21	0.74	7.75	0.16	
034	Middlesex Street	7/15/2014 15:50	7/15/2014 16:20	261,660	0.50	1.21	0.74	7.75	0.16	
039	South Webster Street	7/15/2014 15:50	7/15/2014 16:30	16,528	0.67	1.21	0.74	7.75	0.16	
021A	Middle Siphon	7/15/2014 15:50	7/15/2014 16:35	415,195	0.75	1.21	0.74	7.75	0.16	
024	Upper siphon	7/15/2014 15:50	7/15/2014 16:55	2,901,914	1.08	1.21	0.74	7.75	0.16	
013	Lower Siphon	7/15/2014 16:05	7/15/2014 17:40	475,652	1.58	1.21	0.74	7.75	0.16	
021F	Middle Barrel Radio Market	7/15/2014 15:50	7/15/2014 18:10	430,814	2.33	1.21	0.74	7.75	0.16	
021D	Locke Street South (12-inch siphon)	7/15/2014 15:45	7/15/2014 23:55	324,104	8.17	1.21	0.74	7.75	0.16	
Storm Total				6,035,341						
021D	Locke Street South (12-inch siphon)	7/16/2014 0:00	7/16/2014 7:05	129,556	7.08	1.21	0.74	7.75	0.16	
021D	Locke Street South (12-inch siphon)	7/27/2014 11:25	7/27/2014 11:35	2,021	0.17	0.26	0.05	3.00	0.09	
021F	Middle Barrel Radio Market	7/27/2014 11:30	7/27/2014 11:35	3,400	0.08	0.26	0.05	3.00	0.09	
Storm Total				134,978						

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessmnt							
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
021G	Winter street	7/28/2014 17:25	7/28/2014 17:35	59,075	0.17	0.89	0.24	11.25	0.08
021A	Middle Siphon	7/28/2014 17:30	7/28/2014 17:40	35,587	0.17	0.89	0.24	11.25	0.08
032	Bradford Avenue	7/28/2014 17:25	7/28/2014 17:40	99,952	0.25	0.89	0.24	11.25	0.08
034	Middlesex Street	7/28/2014 17:25	7/28/2014 17:40	55,248	0.25	0.89	0.24	11.25	0.08
040	Bethany Avenue	7/28/2014 17:25	7/28/2014 17:40	51,515	0.25	0.89	0.24	11.25	0.08
041	Chestnut Street	7/28/2014 17:25	7/28/2014 17:40	21,985	0.25	0.89	0.24	11.25	0.08
021H	Winter and Hale	7/28/2014 17:30	7/28/2014 17:45	72,758	0.25	0.89	0.24	11.25	0.08
024	Upper siphon	7/28/2014 17:35	7/28/2014 17:45	114,933	0.17	0.89	0.24	11.25	0.08
039	South Webster Street	7/28/2014 17:40	7/28/2014 17:45	5,429	0.08	0.89	0.24	11.25	0.08
021D	Locke Street South (12- inch siphon)	7/28/2014 9:30	7/28/2014 17:55	76,157	8.42	0.89	0.24	11.25	0.08
021F	Middle Barrel Radio Market	7/28/2014 9:40	7/28/2014 17:55	144,228	8.25	0.89	0.24	11.25	0.08
Storm Total				736,868					
039	South Webster Street	8/1/2014 16:30	8/1/2014 0:00	13,676	0.08	0.93	0.56	3.75	0.25
038	High Street	8/1/2014 16:25	8/1/2014 16:25	6,332	0.08	0.93	0.56	3.75	0.25
021B	Emerson Street	8/1/2014 16:25	8/1/2014 16:30	42,592	0.08	0.93	0.56	3.75	0.25
021G	Winter street	8/1/2014 16:25	8/1/2014 16:35	136,025	0.17	0.93	0.56	3.75	0.25
021E	Locke Street South (18- inch siphon)		8/1/2014 16:40	2,294	0.08	0.93	0.56	3.75	0.25
040	Bethany Avenue	8/1/2014 16:20	8/1/2014 16:40	123,043	0.33	0.93	0.56	3.75	0.25
041	Chestnut Street	8/1/2014 16:20	8/1/2014 16:40	38,016	0.33	0.93	0.56	3.75	0.25
021H	Winter and Hale	8/1/2014 16:15	8/1/2014 16:45	187,490	0.50	0.93	0.56	3.75	0.25
032	Bradford Avenue	8/1/2014 13:30	8/1/2014 16:45	314,358	3.25	0.93	0.56	3.75	0.25
034	Middlesex Street	8/1/2014 16:25	8/1/2014 16:45	209,789	0.33	0.93	0.56	3.75	0.25
021D	Locke Street South (12- inch siphon)	8/1/2014 16:10	8/1/2014 16:50	96,589	0.67	0.93	0.56	3.75	0.25
021F	Middle Barrel Radio Market	8/1/2014 16:15	8/1/2014 16:50	245,634	0.58	0.93	0.56	3.75	0.25
024	Upper siphon	8/1/2014 16:25	8/1/2014 16:50	1,498,018	0.42	0.93	0.56	3.75	0.25
021A	Middle Siphon	8/1/2014 16:25	8/1/2014 17:00	388,975	0.58	0.93	0.56	3.75	0.25
Storm Total				3,302,830					
038	High Street	8/13/2014 13:20	8/13/2014 13:30	20,766	0.17	1.71	0.14	16.25	0.11
021G	Winter street		8/13/2014 18:10	563	0.08	1.71	0.14	16.25	0.11
021H	Winter and Hale	8/13/2014 13:55	8/13/2014 19:15	18,188	5.33	1.71	0.14	16.25	0.11
034	Middlesex Street	8/13/2014 13:50	8/13/2014 19:15	26,924	5.42	1.71	0.14	16.25	0.11
040	Bethany Avenue	8/13/2014 13:20	8/13/2014 19:15	26,754	5.92	1.71	0.14	16.25	0.11
041	Chestnut Street	8/13/2014 13:50	8/13/2014 19:15	13,333	5.42	1.71	0.14	16.25	0.11
032	Bradford Avenue	8/13/2014 13:50	8/13/2014 19:20	40,206	5.50	1.71	0.14	16.25	0.11
021A	Middle Siphon	8/13/2014 19:10	8/13/2014 19:25	14,352	0.25	1.71	0.14	16.25	0.11
039	South Webster Street	8/13/2014 13:55	8/13/2014 19:25	10,862	5.50	1.71	0.14	16.25	0.11
021F	Middle Barrel Radio Market	8/13/2014 13:30	8/13/2014 19:30	292,760	6.00	1.71	0.14	16.25	0.11
021D	Locke Street South (12- inch siphon)	8/13/2014 6:30	8/13/2014 19:35	132,120	13.08	1.71	0.14	16.25	0.11
013	Lower Siphon	8/13/2014 19:15	8/13/2014 20:05	477,279	0.83	1.71	0.14	16.25	0.11
021D	Locke Street South (12- inch siphon)	8/31/2014 19:50	8/31/2014 19:55	784	0.08	0.26	0.08	6.25	0.04
Storm Total				1,074,892					

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessmnt							
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
038	High Street	9/2/2014 14:25	9/2/2014 14:30	1,008	0.08	0.29	0.27	0.75	0.39
021G	Winter street	9/2/2014 14:35	9/2/2014 14:40	112,036	0.08	0.29	0.27	0.75	0.39
032	Bradford Avenue	9/2/2014 14:30	9/2/2014 14:40	176,887	0.17	0.29	0.27	0.75	0.39
034	Middlesex Street	9/2/2014 14:30	9/2/2014 14:40	126,774	0.17	0.29	0.27	0.75	0.39
040	Bethany Avenue	9/2/2014 14:25	9/2/2014 14:40	91,280	0.25	0.29	0.27	0.75	0.39
041	Chestnut Street	9/2/2014 14:30	9/2/2014 14:45	34,844	0.25	0.29	0.27	0.75	0.39
021E	Locke Street South (18- inch siphon)	9/2/2014 14:50	9/2/2014 14:50	2,044	0.08	0.29	0.27	0.75	0.39
024	Upper siphon	9/2/2014 14:35	9/2/2014 14:50	431,851	0.25	0.29	0.27	0.75	0.39
039	South Webster Street	9/2/2014 14:35	9/2/2014 14:50	1,600	0.25	0.29	0.27	0.75	0.39
021A	Middle Siphon	9/2/2014 14:35	9/2/2014 14:55	132,091	0.33	0.29	0.27	0.75	0.39
021H	Winter and Hale	9/2/2014 14:30	9/2/2014 14:55	166,309	0.42	0.29	0.27	0.75	0.39
021D	Locke Street South (12- inch siphon)	9/2/2014 14:25	9/2/2014 15:00	82,793	0.58	0.29	0.27	0.75	0.39
021F	Middle Barrel Radio Market	9/2/2014 14:30	9/2/2014 15:00	214,537	0.50	0.29	0.27	0.75	0.39
013	Lower Siphon	9/2/2014 14:50	9/2/2014 15:40	369,642	0.83	0.29	0.27	0.75	0.39
Storm Total				1,943,696					
021D	Locke Street South (12- inch siphon)	9/6/2014 16:20	9/6/2014 16:45	11,788	0.42	0.29	0.01	12.50	0.02
021F	Middle Barrel Radio Market	9/6/2014 16:25	9/6/2014 16:50	12,912	0.42	0.29	0.01	12.50	0.02
Storm Total				24,700					
021G	Winter street		9/21/2014 5:05	11,331	0.08	0.36	0.18	2.75	0.13
021A	Middle Siphon	9/21/2014 5:05	9/21/2014 5:10	11,602	0.08	0.36	0.18	2.75	0.13
021E	Locke Street South (18- inch siphon)	9/21/2014 5:10	9/21/2014 5:10	1,147	0.08	0.36	0.18	2.75	0.13
032	Bradford Avenue	9/21/2014 5:00	9/21/2014 5:10	71,069	0.17	0.36	0.18	2.75	0.13
034	Middlesex Street	9/21/2014 5:00	9/21/2014 5:10	38,110	0.17	0.36	0.18	2.75	0.13
040	Bethany Avenue	9/21/2014 4:45	9/21/2014 5:10	36,766	0.42	0.36	0.18	2.75	0.13
041	Chestnut Street	9/21/2014 5:00	9/21/2014 5:10	17,836	0.17	0.36	0.18	2.75	0.13
021H	Winter and Hale	9/21/2014 4:55	9/21/2014 5:15	48,967	0.33	0.36	0.18	2.75	0.13
024	Upper siphon	9/21/2014 5:00	9/21/2014 5:15	9,441	0.25	0.36	0.18	2.75	0.13
039	South Webster Street	9/21/2014 5:00	9/21/2014 5:15	12,573	0.25	0.36	0.18	2.75	0.13
021F	Middle Barrel Radio Market	9/21/2014 4:50	9/21/2014 5:25	101,167	0.58	0.36	0.18	2.75	0.13
021D	Locke Street South (12- inch siphon)	9/21/2014 4:45	9/21/2014 5:30	38,764	0.75	0.36	0.18	2.75	0.13
Storm Total				398,774					
021D	Locke Street South (12- inch siphon)	10/1/2014 13:40	10/1/2014 14:35	11,922	0.92	0.75	0.06	21.00	0.04
Storm Total				11,922					
021D	Locke Street South (12- inch siphon)	10/4/2014 21:00	10/4/2014 21:00	935	0.08	0.10	0.03	5.50	0.02
Storm Total				935					
021F	Middle Barrel Radio Market	10/16/2014 19:40	10/16/2014 19:55	12,798	0.25	0.52	0.04	11.50	0.05
021D	Locke Street South (12- inch siphon)	10/16/2014 15:00	10/16/2014 20:05	17,584	5.08	0.52	0.04	11.50	0.05
Storm Total				30,382					
021F	Middle Barrel Radio Market	10/22/2014 22:20	10/22/2014 22:40	15,077	0.33	3.80	0.19	33.75	0.11
021D	Locke Street South (12- inch siphon)	10/22/2014 22:05	10/22/2014 22:50	20,629	0.75	3.80	0.19	33.75	0.11
Storm Total				35,706					

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessment							
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
021G	Winter street	10/23/2014 3:00	10/23/2014 3:05	8,498	0.08	0.11	0.03	10.50	0.01
021E	Locke Street South (18- inch siphon)	10/23/2014 3:05	10/23/2014 3:10	2,605	0.08	0.11	0.03	10.50	0.01
040	Bethany Avenue	10/23/2014 0:30	10/23/2014 7:05	27,781	6.58	0.11	0.03	10.50	0.01
021H	Winter and Hale	10/23/2014 0:45	10/23/2014 7:20	79,640	6.58	0.11	0.03	10.50	0.01
041	Chestnut Street	10/23/2014 0:35	10/23/2014 8:50	58,018	8.25	0.11	0.03	10.50	0.01
034	Middlesex Street	10/23/2014 0:40	10/23/2014 9:10	85,736	8.50	0.11	0.03	10.50	0.01
032	Bradford Avenue	10/23/2014 0:40	10/23/2014 9:15	105,722	8.58	0.11	0.03	10.50	0.01
039	South Webster Street	10/23/2014 0:40	10/23/2014 9:20	69,859	8.67	0.11	0.03	10.50	0.01
024	Upper siphon	10/23/2014 3:05	10/23/2014 9:25	338,072	6.33	0.11	0.03	10.50	0.01
021A	Middle Siphon	10/23/2014 3:00	10/23/2014 9:35	297,774	6.58	0.11	0.03	10.50	0.01
021F	Middle Barrel Radio Market	10/23/2014 0:40	10/23/2014 10:05	884,478	9.42	0.11	0.03	10.50	0.01
013	Lower Siphon	10/23/2014 3:05	10/23/2014 10:55	1,912,068	7.83	0.11	0.03	10.50	0.01
021D	Locke Street South (12- inch siphon)	10/23/2014 0:30	10/23/2014 12:00	394,202	11.50	0.11	0.03	10.50	0.01
Storm Total				4,264,454					
021D	Locke Street South (12- inch siphon)	11/2/2014 11:20	11/2/2014 11:50	4,580	0.50	0.25	0.04	3.50	0.07
Storm Total				4,580					
021D	Locke Street South (12- inch siphon)	11/6/2014 19:45	11/6/2014 19:45	4,050	0.08	0.42	0.03	18.75	0.02
Storm Total				4,050					
021F	Middle Barrel Radio Market	11/17/2014 16:40	11/17/2014 16:50	4,641	0.17	1.14	0.07	18.00	0.06
021D	Locke Street South (12- inch siphon)	11/17/2014 8:20	11/17/2014 17:15	36,297	8.92	1.14	0.07	18.00	0.06
Storm Total				40,938					
021F	Middle Barrel Radio Market	12/3/2014 2:05	12/3/2014 2:40	31,191		0.48	0.06	11.00	0.04
021D	Locke Street South (12- inch siphon)	12/3/2014 1:50	12/3/2014 3:35	26,960	1.75	0.48	0.06	11.00	0.04
Storm Total				58,150					
021D	Locke Street South (12- inch siphon)	12/6/2014 21:55	12/6/2014 22:20	1,806	0.42	1.04	0.03	26.50	0.04
Storm Total				1,806					

Appendix A CSO FLOW METER SUMMARY 2014

		QA/QC flow Assessmnt								
NPDES ID	CSO Identification	Start Date Time	End Date Time	Total Vol (gals.)/event	CSO Duration (hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	
032	Bradford Avenue	12/9/2014 14:55	12/9/2014 16:15	12,022.0	1.33	3.33	0.19	23.25	0.14	
021E	Locke Street South (18-inch siphon)	12/9/2014 14:55	12/9/2014 16:25	11,337	1.50	3.33	0.19	23.25	0.14	
034	Middlesex Street	12/9/2014 13:05	12/9/2014 18:15	509,248	5.17	3.33	0.19	23.25	0.14	
041	Chestnut Street	12/9/2014 12:15	12/9/2014 18:15	195,331	6.00	3.33	0.19	23.25	0.14	
021H	Winter and Hale	12/9/2014 13:15	12/9/2014 18:20	168,687	5.08	3.33	0.19	23.25	0.14	
024	Upper siphon	12/9/2014 13:25	12/9/2014 18:30	1,515,139	5.08	3.33	0.19	23.25	0.14	
021A	Middle Siphon	12/9/2014 12:55	12/9/2014 19:40	6,682,543	6.75	3.33	0.19	23.25	0.14	
013	Lower Siphon	12/9/2014 12:50	12/9/2014 22:10	4,951,160	9.33	3.33	0.19	23.25	0.14	
021F	Middle Barrel Radio Market	12/9/2014 10:50	12/9/2014 22:20	1,452,661	11.50	3.33	0.19	23.25	0.14	
039	South Webster Street	12/9/2014 12:05	12/9/2014 22:35	635,761	10.50	3.33	0.19	23.25	0.14	
021D	Locke Street South (12-inch siphon)	12/9/2014 10:25	12/9/2014 23:15	484,522	12.83	3.33	0.19	23.25	0.14	
Storm Total				16,618,411						
021F	Middle Barrel Radio Market	12/10/2014 14:30	12/10/2014 15:20	36,511	0.83	0.23	0.03	5.00	0.05	
021D	Locke Street South (12-inch siphon)	12/10/2014 14:15	12/10/2014 15:30	23,592	1.25	0.23	0.03	5.00	0.05	
021F	Middle Barrel Radio Market	12/17/2014 5:30	12/17/2014 5:35	893	0.08	0.04	7.75	0.05	0.05	
021D	Locke Street South (12-inch siphon)	12/17/2014 5:10	12/17/2014 5:45	8,313	0.58	0.40	0.04	7.75	0.05	
Storm Total				69,310						
021D	Locke Street South (12-inch siphon)	12/23/2014 18:30	12/24/2014 20:00	42,143	25.50	1.04	0.06	42.50	0.02	
021D	Locke Street South (12-inch siphon)	12/25/2014 7:50	12/25/2014 8:15	3,924	0.42	0.13	0.03	2.75	0.05	
Storm Total				46,067						

Appendix B CSO FLOW METER SUMMARY PER OUTFALL 2014

CSO Summary/Outfall

From Date	To Date
3/20/2014 1:00	12/31/2014 0:00

CSO Name	CSO ID	CSO TOTAL TO DATE
Lower Siphon	013	8,744,270
Middle Siphon	021A	9,193,993
Locke Street South (12-inch siphon)	021B	64,698
Locke Street South (18-inch siphon)	021D	2,581,701
Middle Barrel Radio Market	021E	24,905
Winter street	021F	7,796,942
Winter and Hale	021G	601,543
Upper siphon	021H	1,258,304
Bradford Avenue	024	7,302,109
Middlesex Street	032	1,927,480
Middlesex Street	034	1,547,514
High Street	038	35,078
South Webster Street	039	860,624
Bethany Avenue	040	660,768
Chestnut Street	041	607,135
	System Total :	43,207,063

APPENDIX C: CALENDAR YEAR 2014 RAINFALL DATA

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Duration (hours)	Daily Avg. Intensity (in./hr.)
1/2/2014	0.32	0.05	30.50	0.01
1/5/2014	0.02	0.02	0.50	0.04
1/6/2014	0.60	0.15	23.00	0.03
1/10/2014	0.09	0.03	6.75	0.01
1/11/2014	0.08	0.03	4.50	0.02
1/12/2014	0.30	0.08	9.25	0.03
1/14/2014	0.78	0.12	14.25	0.05
1/18/2014	0.63	0.16	25.25	0.02
1/27/2014	0.01	0.01	0.25	0.04
2/2/2014	0.08	0.06	1.75	0.05
2/3/2014	0.01	0.01	0.25	0.04
2/5/2014	0.96	0.18	20.50	0.05
2/10/2014	0.03	0.02	1.25	0.02
2/13/2014	1.46	0.23	100.00	0.01
2/15/2014	0.24	0.05	9.50	0.03
2/18/2014	0.56	0.14	16.50	0.03
2/19/2014	0.20	0.14	2.00	0.10
2/20/2014	0.80	0.16	21.50	0.04
3/11/2014	0.01	0.01	0.50	0.02
3/12/2014	0.52	0.14	18.75	0.03
3/15/2014	0.01	0.01	0.25	0.04
3/20/2014	0.58	0.19	5.75	0.10
3/28/2014	0.04	0.02	2.00	0.02
3/29/2014	3.46	0.37	43.50	0.08
4/4/2014	0.41	0.11	7.25	0.06
4/7/2014	0.58	0.19	5.75	0.10
4/11/2014	0.07	0.03	8.25	0.01
4/13/2014	0.01	0.01	0.25	0.04
4/15/2014	0.74	0.15	15.25	0.05
4/22/2014	0.01	0.01	2.25	0.01
4/23/2014	0.58	0.25	3.25	0.18
4/26/2014	0.20	0.06	4.75	0.04
4/27/2014	0.10	0.05	9.50	0.03
4/30/2014	0.03	0.01	7.75	0.00
5/1/2014	0.86	0.01	15.25	0.06
5/2/2014	0.18	0.14	6.00	0.03
5/10/2014	0.08	0.04	2.25	0.04
5/16/2014	0.21	0.13	6.50	0.03
5/17/2014	0.57	0.31	2.75	0.21
5/19/2014	0.14	0.05	4.25	0.03
5/22/2014	0.07	0.03	13.00	0.01
5/24/2014	0.06	0.06	1.25	0.09
5/27/2014	0.52	0.17	15.25	0.03
6/4/2014	0.01	0.01	0.25	0.04

APPENDIX C: CALENDAR YEAR 2014 RAINFALL DATA

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Duration (hours)	Daily Avg. Intensity (in./hr.)
6/5/2014	0.41	0.10	9.50	0.04
6/6/2014	0.01	0.01	0.25	0.04
6/10/2014	0.01	0.01	0.25	0.04
6/13/2014	0.70	0.20	15.25	0.05
6/18/2014	0.01	0.01	0.25	0.04
6/24/2014	0.05	0.05	0.25	0.20
6/26/2014	0.49	0.25	4.75	0.10
7/2/2014	0.01	0.01	0.25	0.04
7/3/2014	0.72	0.32	7.00	0.10
7/4/2014	1.70	0.08	19.25	0.09
7/7/2014	0.23	0.06	4.50	0.05
7/10/2014	0.13	0.12	0.50	0.26
7/15/2014	1.21	0.74	7.75	0.16
7/23/2014	0.09	0.03	1.00	0.09
7/27/2014	0.26	0.05	3.00	0.09
7/28/2014	0.89	0.24	11.25	0.08
7/30/2014	0.01	0.01	0.25	0.04
7/31/2014	0.93	0.56	3.75	0.25
8/1/2014	0.01	0.01	0.25	0.04
8/7/2014	0.01	0.01	0.25	0.04
8/13/2014	1.71	0.14	16.25	0.11
8/22/2014	0.36	0.13	4.50	0.08
8/31/2014	0.26	0.08	6.25	0.04
9/2/2014	0.29	0.27	0.75	0.39
9/6/2014	0.29	0.01	12.50	0.02
9/13/2014	0.18	0.03	4.25	0.04
9/16/2014	0.02	0.01	1.25	0.02
9/21/2014	0.36	0.18	2.75	0.13
9/29/2014	0.03	0.01	6.00	0.01
9/30/2014	0.04	0.01	4.25	0.01
10/1/2014	0.75	0.06	21.00	0.04
10/3/2014	0.03	0.01	4.25	0.01
10/4/2014	0.10	0.03	5.50	0.02
10/8/2014	0.05	0.02	2.50	0.02
10/11/2014	0.18	0.02	3.50	0.05
10/16/2014	0.52	0.04	11.50	0.05
10/17/2014	0.01	0.04	0.25	0.04
10/18/2014	0.02	0.01	2.50	0.01
10/22/2014	3.80	0.19	33.75	0.11
10/23/2014	0.11	0.03	10.50	0.01
10/26/2014	0.01	0.04	0.25	0.04
10/29/2014	0.12	0.03	2.50	0.05
11/1/2014	0.44	0.03	9.25	0.05
11/2/2014	0.25	0.04	3.50	0.07

APPENDIX C: CALENDAR YEAR 2014 RAINFALL DATA

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Duration (hours)	Daily Avg. Intensity (in./hr.)
11/6/2014	0.42	0.03	18.75	0.02
11/14/2014	0.19	0.07	7.75	0.02
11/17/2014	1.14	0.07	18.00	0.06
11/24/2014	0.35	0.04	7.50	0.05
11/26/2014	1.29	0.05	16.25	0.08
11/28/2014	0.05	0.01	7.25	0.01
12/2/2014	0.48	0.06	11.00	0.04
12/3/2014	0.01	0.04	0.25	0.04
12/6/2014	1.04	0.03	26.50	0.04
12/9/2014	3.33	0.19	23.25	0.14
12/10/2014	0.23	0.03	5.00	0.05
12/11/2014	0.03	0.02	4.75	0.04
12/17/2014	0.40	0.04	7.75	0.05
12/18/2014	0.03	0.01	2.00	0.02
12/22/2014	0.04	0.01	6.25	0.01
12/23/2014	1.04	0.06	42.50	0.02
12/25/2014	0.13	0.03	2.75	0.05
12/28/2014	0.06	0.02	2.00	0.03

Check 45.29

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
	Red Indicates CSO Flow meter respond but block was recorded as on																			
1/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/2/2014	0.32	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/5/2014	0.02	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/6/2014	0.60	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/7/2014	0.00	0.00	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1
1/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/10/2014	0.09	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/11/2014	0.08	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/12/2014	0.30	0.08	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1/13/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/14/2014	0.78	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/15/2014	0.00	0.00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	1
1/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/18/2014	0.63	0.16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/27/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/31/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/2/2014	0.08	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/3/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/5/2014	0.96	0.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/10/2014	0.03	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/13/2014	1.46	0.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/15/2014	0.24	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/18/2014	0.56	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/19/2014	0.20	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/20/2014	0.80	0.16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
2/21/2014	0.00	0.00	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	1
2/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/2/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/10/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/11/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/12/2014	0.52	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/13/2014	0.00	0.00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/15/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/20/2014	0.58	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/28/2014	0.04	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/29/2014	3.46	0.37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/31/2014	0.00	0.00	0	0	0	1	1	0	1	0	0	0	1	1	1	0	1	1	1	1
4/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/2/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/4/2014	0.41	0.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/5/2014	0.00	0.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/7/2014	0.58	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/10/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/11/2014	0.07	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/13/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
4/15/2014	0.74	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/16/2014	0.00	0.00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
4/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/22/2014	0.02	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/23/2014	0.57	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/24/2014	0.00	0.00	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
4/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/26/2014	0.20	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/27/2014	0.10	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/30/2014	0.03	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/1/2014	0.86	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/2/2014	0.18	0.14	0	0	0	0	1	0	1	0	0	0	0	0	1	1	1	0	0	0
5/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/10/2014	0.08	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/13/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/16/2014	0.21	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/17/2014	0.57	0.31	1	0	0	1	1	0	1	1	1	0	0	0	1	1	1	1	1	1
5/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/19/2014	0.14	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/22/2014	0.07	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/24/2014	0.06	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/27/2014	0.52	0.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/28/2014	0.00	0.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/31/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/2/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/4/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/5/2014	0.41	0.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/6/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
6/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/10/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/13/2014	0.70	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6/14/2014	0.00	0.00	1	0	0	1	1	0	1	1	1	1	0	0	1	1	1	1	1	0
6/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/18/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/24/2014	0.05	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/26/2014	0.49	0.25	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
6/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/3/2014	0.72	0.32	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
7/4/2014	1.70	0.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/5/2014	0.00	0.00	0	0	0	0	1	0	1	0	1	0	0	0	1	1	1	0	0	0
7/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/7/2014	0.23	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/10/2014	0.13	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/13/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/15/2014	1.21	0.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/23/2014	0.09	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/27/2014	0.26	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/28/2014	0.89	0.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
7/30/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/31/2014	0.93	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/1/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/2/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/7/2014	0.01	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/10/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2014	1.71	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/22/2014	0.36	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/31/2014	0.26	0.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/2/2014	0.29	0.27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/6/2014	0.29	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/10/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/13/2014	0.18	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/16/2014	0.02	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/17/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
9/21/2014	0.36	0.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/29/2014	0.03	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/30/2014	0.04	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/1/2014	0.75	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/2/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/3/2014	0.03	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/4/2014	0.10	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/6/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/8/2014	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/10/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/11/2014	0.18	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/13/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/16/2014	0.52	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/17/2014	0.01	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/18/2014	0.02	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/22/2014	3.80	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/23/2014	0.11	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/26/2014	0.01	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/28/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/29/2014	0.12	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/31/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1/2014	0.44	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/2/2014	0.25	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/3/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/6/2014	0.42	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/9/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/10/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/11/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D: CALENDAR YEAR 2014 CSO BLOCK CHECK RESULTS.

Date	Rainfall (in.)/day	Peak Intensity (hr.)	LOWER SIPHON NPDES 013	MAIN ST NORTH NPDES 019	Emerson Street NPDES 021B	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	CENTER BARREL RADIO MARKET NPDES 21-F	WINTER ST NPDES 21-G	WINTER AND HALE NPDES 21- H	UPPER SIPHON NPDES 024	BROADWAY DIVERSIONAL NPDES 037	HIGH ST DIVERSIONAL NPDES 038	Bethany Street NPDES 040	Chestnut Street NPDES 041	BRADFORD AVE NPDES 032	MIDDLESEX STREET NPDES 034	Colby St & Salem Regulator NPDES 042	South Webster CSO NPDES 039
11/13/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/14/2014	0.19	0.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/17/2014	1.14	0.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/18/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/22/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/23/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/24/2014	0.35	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/25/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/26/2014	1.29	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/28/2014	0.05	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/1/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/2/2014	0.48	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/3/2014	0.01	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/4/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/5/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/6/2014	1.04	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/7/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/8/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/9/2014	3.33	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/10/2014	0.23	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/11/2014	0.03	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/12/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/13/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/14/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/15/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/16/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/17/2014	0.40	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/18/2014	0.03	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/19/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/20/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/21/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/22/2014	0.04	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/23/2014	1.04	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/24/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/25/2014	0.13	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/26/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/27/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/28/2014	0.06	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/29/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/30/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/31/2014	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:	45.29		2	0	0	3	7	4	13	3	5	1	1	1	8	7	6	4	3	10

CHECK CSO SIGNAGE

Task No.		Request Date	4/22/2014
Tenant	CITY WIDE	Request Time	7:00:00AM
Assigned By	PJJ	Originator	PHIL
Assigned To	PAR	Telephone No.	
Scheduled Start Date	4/22/2014	Extension	
Scheduled Finish Date	4/22/2014	WO Type	PLANNED
Perform by Warranty	No	Completion Date	4/24/2014
Priority	1.00	Completion Time	
Expense Class		Project Task	
Project ID			

Craft	Estimated Crew Size	Estimated Labor Hours
COLL-REG	4.00	28.00

Equipment No. -		User-defined field 1
Equipment Description		User-defined field 2
Serial No.		User-defined field 3
Cost Center		User-defined field 4
General Ledger Code		User-defined field 5
Department		User-defined field 6
Location	CITY WIDE	User-defined field 7
Sub-location 1 -		User-defined field 8
Sub-location 2 -		User-defined field 9
Sub-location 3 -		User-defined field 10
Reason for Outage		
Must Be Down	No	
Estimated Down Time		
Down Time		

Safety Note

Comments
CHECK CSO STRUCTURES FOR SIGNAGE, REMOVE SIGNAGE FROM CLOSED STRUCTURES. ADDED SIGNS AT HIGH ST AND BROADWAY OUTFALL. ADDED SIGNS AT WINTER AND WINTER/HALE OUTFALL. REPLACED SIGNS AT MIDDLESEX ST. ADDED SIGN FOR BETHANY ST, ADDED SIGN FOR CHESTNUT ST. PREVIOUSY ADDED SIGN AT S. WEBSTER.

Equipment No. (Meter)	Meter Name	Meter Reading

Item No.	Equipment No. (Parts)	Item Description	Qty Required	Date Used	Qty Used
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List extra parts and comments here

Employee Code	Equipment No. (Employee)	Work Date	First Name	Last Name	Regular Hours	Overtime Hours
DWS	-	4/22/2014	DAVID	SHAW	5.00	
PR	-	4/22/2014	PEDRO	ROSARIO	5.00	
PR	-	4/24/2014	PEDRO	ROSARIO	6.00	
SAM	-	4/22/2014	SAMUEL	MARINEZ	5.00	
ZEB	-	4/22/2014	ZEBULUN	DAY	5.00	
ZEB	-	4/24/2014	ZEBULUN	DAY	6.00	

Appendix F: Downstream Notification¹

First Name	Last Name	Address	City	State	Postal Code	Tele #	DEPT	E-mail
Robert	Desmaris	62 Friend Street	Amesbury	MA	01913	1-978-388-8127	DPW Director	rob@amesburyma.gov
Jeff	Mason		Amesbury	MA	01913	978-388-0853	Water System Manager	masonj@amesburyma.gov
Nihar	Mohanty	1 Winter Street	Boston	MA	02108-4746	1-978-694-3237	Mass DEP	nihar.mohanty@state.ma.us
Joy	Hilton	1 Congress St	Boston	MA	02203	(617) 918-1877	EPA Region I	hilton.joy@epa.gov
Robert	O'Hanley	183 Main Street	Groveland	MA	01834	(978) 372-3942	Board of Health	health@grovelandma.com
Thomas	Cusick	183 Main Street	Groveland	MA	01834	(978) 556-7200 x219	Water/Sewer	Tcusick@grovelandma.com
Bonnie	Dufresne	4 Sumner Street	Haverhill	MA	01830	(978) 374-2325	Board of Health	bdufresne@cityofhaverhill.com
Michael	Vets	72 Coffin Avenue	Haverhill	MA	01830	(978) 374-2100	Harbor Master	vetsm@comcast.net
Fred	Haftty	40 South Porter Street	Haverhill	MA	01835	(978) 372-2382	Haverhill WWTP	fhaffty@haverhillwater.com
Mike	Stankovich	500 Primrose Street	Haverhill	MA	01830	(978) 374-2360	Haverhill DPW Director	mstankovich@haverhillwater.com
Philip	Ryan	40 South Porter Street	Haverhill	MA	01835	(978) 374-2383	Senior Collection Operator	pryan@haverhillwater.com
Mr.	Richard	Spinale	Merrimac	MA	01860		DPW Director	dprw@townofmerrimac.com
Eileen	Hurley	2 School Street	Merrimac	MA	01860	978-346-4066	Board of Health	boh@townofmerrimac.com
Alba L.	Gouldthorpe	25 High Road	Newbury	MA	01951	(978) 499-3898	Board of Health	boardofhealth@townofnewbury.org
Don	Freeman	CDM Smith						freemadb@cdmsmith.com
Neal	Campbell							campbellnw@cdmsmith.com
Robert	Ward	40 South Porter Street	Haverhill	MA	01835	(978) 372-2382	Haverhill WWTP	rward@haverhillwater.com
Fred	Haftty	40 South Porter Street	Haverhill	MA	01835	(978) 372-2382	Haverhill WWTP	fhaffty@haverhillwater.com
Philip	Ryan	40 South Porter Street	Haverhill	MA	01835	(978) 372-2382	Haverhill WWTP	pryan@haverhillwater.com
Robert	Bracey	60 Pleasant Street	Newburyport	MA	01950	(978) 465-4410	Director Board of Health	bbracey@cityofnewburyport.com
Paul	Hogg	PO Box 550	Newburyport	MA	01950	(978) 462-3746	Harbor Master	phogg@cityofnewburyport.com
Jamie	Tuccolo	16A Perry Way	Newburyport	MA	01950	1-978-417-1223	Collection System Manager	jtuccolo@cityofnewburyport.com
Joseph	Dugan		Newburyport	MA	01950	(978) 465-4461	Newburyport Wastewater Pl	jdugan@cityofnewburyport.com
Andrea	Brouchu	P.O. Box 5072	Salisbury	MA	01952	(978) 462-3430	Board of Health	abrouchu@salisburyma.gov
Jeff	Ingalls	P.O. 5221	Salisbury	MA	01952	(978) 465-4058	Sewer Treatment Plant	wwtp@salisburyma.gov
Donald	Ivesque	39 Lafavette Road	Salisbury	MA	01952	978-463-0656	Director Public Works	dlevesque@salisburyma.gov
Rav	Pike	5 Beach Road	Salisbury	MA	01952	978 499 0740	Harbor Master	harbormaster@salisburyma.gov
Paul	Sevigny	381 Main Street	West Newbury	MA	01985	(978) 363-1109	Board of Health	psevigny@town.west-newbury.ma.us
Jeff	Kennedy					978-465-3553 x320	North Shore Shellfish Project	shellfish.newburyport@state.ma.us
							N. Shore Shellfish Project	shellfish.newburyport@state.ma.us

1. Updated April 18, 2011
2. Updated November 2011
3. Updated March 15, 2012
4. Undated February 2013