



# Haverhill

Paul J. Jessel, Collection System Supervisor  
Water/Wastewater Division  
Phone: 978-374-2382 Fax: 978-521-4083  
pjessel@haverhillwater.com

April 29, 2014

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 2013

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 2013 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 developed for the August 2, 2011 Phase II Long-Term CSO Control Plan (LTCP) was used to report the CSO discharge volumes

**APPENDIX A: CSO SUMMARY CALANDER YEAR 2013** presents estimates of CSO activations (including number of events, duration and volume discharge) during the 2013 calendar year. There were no predicted discharges from some of the CSOs listed in Appendix A.

NetStorm, a program created by CDM Smith, was used to identify individual CSO events, volumes, activation date and time, along with durations, from the SWMM output files. From NetStorm data, the end date and time of each CSO event is then calculated.

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 also utilizes the rain gauge information and develops rainfall statistics per storm event. See

**APPENDIX B: CALENDAR YEAR 2013 RAINFALL DATA** utilizing NetStorm. (Note some storm duration last longer than one day 5-24-13 29 hours).

The City received 33.86-inches of rainfall for calendar year 2013. 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 records from all CSOs at least monthly base upon the block checks.

The City of Haverhill performs a CSO block testing program. Block test data can be observed in **APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS**.

During routine inspections in Spring 2014, it was discovered that the block was being replaced in an incorrect position in the regulator structure,(Main Street North NPDES # 019) , whereby the block may have been dislodged more frequently than the CSO activated. This condition has been corrected. Block testing results for 2013 may be incorrect and are note reported.

- 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.

*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 D: 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 [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 E: 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](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 test results and plotted these results with available Supervisory Control and Data Acquisition (SCADA) influent flows. Currently, the City's Collection Division checks the CSO blocks whenever the flow at the treatment plant exceeds 25 MGD.

The City compiled available rainfall data and treatment plant flows from 2008 through 2010 and found that when the City receives 0.10 inches of rain the City could expect a CSO occurrence.

- 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 CSO official 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](http://www.ci.haverhill.ma.us/departments/public_works_department/water_wastewater/wastewater/wastewater_collection_system/combined_sewer_overflows_%28cso%29/index.php)

The SWMM model statistics for 2012 are shown on the City web page on the following link:

[http://www.ci.haverhill.ma.us/departments/public\\_works\\_department/water\\_wastewater/wastewater/wastewater\\_collection\\_system/docs/CSO\\_Annual\\_Report\\_2012.pdf](http://www.ci.haverhill.ma.us/departments/public_works_department/water_wastewater/wastewater/wastewater_collection_system/docs/CSO_Annual_Report_2012.pdf)

- 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.*

- 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 E: DOWNSTREAM COMMUNITIES** represents the list of the current email addresses notified for Calendar 2013.

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

Sincerely,



Paul J. Jessel  
Collection System Supervisor

cc: Mike Stankovich, DPW Director  
Robert Ward, Deputy DPW Water/Wastewater  
Fred Haffty WWTP Facility Manager

WWTP RG - Daily Rainfall Total (inches)	City RG - Daily Rainfall Total (inches)	NPDES ID	CSO Name	Start Date & Time	End Date & Time	Volume (MG)	Duration (hours)
0.27	0.40	032	Bradford Avenue	1/17/2013 11:45:00 AM	1/17/13 12:30 PM	0.086	0.75
0.27	0.40	021D	Little River North	1/17/2013 12:00:00 PM	1/17/13 1:45 PM	0.004	1.75
0.27	0.40	021A	Middle Siphon	1/17/2013 12:30:00 PM	1/17/13 1:30 PM	0.024	1.00
0.21	0.24	032	Bradford Avenue	1/29/2013 1:15:00 PM	1/29/13 1:30 PM	0.010	0.25
0.33	0.22	032	Bradford Avenue	2/10/2013 12:45:00 PM	2/10/13 1:00 PM	0.008	0.25
0.50	0.22	032	Bradford Avenue	2/25/2013 11:15:00 AM	2/25/13 11:30 AM	0.003	0.25
0.03	1.28	021A	Middle Siphon	2/27/2013 8:15:00 AM	2/28/13 12:00 AM	0.407	15.75
0.03	1.28	032	Bradford Avenue	2/27/2013 4:45:00 PM	2/27/13 5:45 PM	0.034	1.00
0.03	1.28	021D	Little River North	2/27/2013 4:45:00 PM	2/27/13 7:45 PM	0.025	3.00
0.68	0.45	032	Bradford Avenue	3/8/2013 4:30:00 PM	3/8/13 6:00 PM	0.127	1.50
0.68	0.45	021A	Middle Siphon	3/8/2013 4:45:00 PM	3/8/13 7:15 PM	0.108	2.50
0.68	0.45	021D	Little River North	3/8/2013 4:45:00 PM	3/8/13 7:15 PM	0.020	2.50
-	0.27	021A	Middle Siphon	3/12/2013 8:45:00 PM	3/12/13 11:00 PM	0.038	2.25
0.13	0.41	032	Bradford Avenue	4/10/2013 9:00:00 PM	4/10/13 9:30 PM	0.030	0.50
0.13	0.41	021A	Middle Siphon	4/10/2013 9:15:00 PM	4/10/13 10:15 PM	0.011	1.00
0.28	0.59	032	Bradford Avenue	5/9/2013 2:45:00 PM	5/9/13 3:15 PM	0.005	0.50
1.00	0.94	032	Bradford Avenue	5/22/2013 1:30:00 AM	5/22/13 4:00 AM	0.228	2.50
1.00	0.94	041	Chestnut Street	5/22/2013 1:30:00 AM	5/22/13 1:45 AM	0.002	0.25
1.00	0.94	021D	Little River North	5/22/2013 1:30:00 AM	5/22/13 6:30 AM	0.039	5.00
1.00	0.94	021A	Middle Siphon	5/22/2013 1:45:00 AM	5/22/13 6:30 AM	0.208	4.75
1.00	0.94	021E	Little River South	5/22/2013 1:45:00 AM	5/22/13 2:00 AM	0.001	0.25
0.04	0.37	032	Bradford Avenue	6/3/2013 8:15:00 AM	6/3/13 8:30 AM	0.002	0.25
0.04	1.59	021A	Middle Siphon	6/7/2013 3:30:00 PM	6/8/13 3:30 AM	0.932	12.00
0.04	1.59	032	Bradford Avenue	6/7/2013 6:00:00 PM	6/7/13 10:45 PM	0.800	4.75
0.04	1.59	021D	Little River North	6/7/2013 6:00:00 PM	6/8/13 3:45 AM	0.563	9.75
0.04	1.59	021E	Little River South	6/7/2013 10:15:00 PM	6/8/13 2:30 AM	0.084	4.25
2.83	1.04	041	Chestnut Street	6/8/2013 2:00:00 AM	6/8/13 2:45 AM	0.016	0.75
2.83	1.04	040	Bethany Avenue	6/8/2013 2:15:00 AM	6/8/13 2:45 AM	0.009	0.50
2.83	1.04	013	Lower Siphon	6/8/2013 3:45:00 AM	6/8/13 4:30 AM	0.164	0.75
-	0.29	032	Bradford Avenue	6/10/2013 11:45:00 PM	6/11/13 1:45 AM	0.070	2.00
0.90	1.11	021A	Middle Siphon	6/11/2013	6/11/13 10:00 AM	0.213	10.00
0.90	1.11	021D	Little River North	6/11/2013 6:15:00 AM	6/11/13 3:00 PM	0.040	8.75
0.90	1.11	032	Bradford Avenue	6/11/2013 8:15:00 PM	6/11/13 9:15 PM	0.129	1.00
0.90	1.11	021E	Little River South	6/11/2013 8:30:00 PM	6/11/13 9:00 PM	0.004	0.50
0.82	0.66	021A	Middle Siphon	6/14/2013 4:15:00 AM	6/14/13 8:00 AM	0.080	3.75
0.82	0.66	032	Bradford Avenue	6/14/2013 7:00:00 AM	6/14/13 7:30 AM	0.009	0.50
0.08	0.41	032	Bradford Avenue	6/18/2013 2:15:00 PM	6/18/13 3:30 PM	0.059	1.25
0.08	0.41	021A	Middle Siphon	6/18/2013 2:45:00 PM	6/18/13 4:30 PM	0.049	1.75
0.08	0.41	021D	Little River North	6/18/2013 3:15:00 PM	6/18/13 4:45 PM	0.000	1.50
-	0.47	032	Bradford Avenue	6/24/2013 11:30:00 AM	6/24/13 12:30 PM	0.095	1.00
-	0.47	021D	Little River North	6/24/2013 8:15:00 PM	6/24/13 9:45 PM	0.001	1.50
-	0.47	021A	Middle Siphon	6/24/2013 8:30:00 PM	6/24/13 9:30 PM	0.021	1.00
0.30	0.51	032	Bradford Avenue	6/25/2013 9:45:00 PM	6/25/13 10:45 PM	0.284	1.00
0.30	0.51	040	Bethany Avenue	6/25/2013 10:00:00 PM	6/25/13 10:15 PM	0.019	0.25
0.30	0.51	041	Chestnut Street	6/25/2013 10:00:00 PM	6/25/13 10:15 PM	0.025	0.25
0.30	0.51	021A	Middle Siphon	6/25/2013 10:00:00 PM	6/25/13 11:30 PM	0.150	1.50
0.30	0.51	021D	Little River North	6/25/2013 10:00:00 PM	6/26/13 12:00 AM	0.100	2.00
0.30	0.51	021E	Little River South	6/25/2013 10:00:00 PM	6/25/13 10:45 PM	0.015	0.75
0.55	0.33	032	Bradford Avenue	6/26/2013 5:15:00 PM	6/26/13 5:45 PM	0.094	0.50
0.55	0.33	021A	Middle Siphon	6/26/2013 5:30:00 PM	6/26/13 6:30 PM	0.034	1.00
0.55	0.33	021D	Little River North	6/26/2013 6:00:00 PM	6/26/13 8:15 PM	0.004	2.25
2.65	2.45	032	Bradford Avenue	7/1/2013 12:45:00 PM	7/1/13 4:00 PM	1.928	3.25
2.65	2.45	034	Middlesex Street	7/1/2013 12:45:00 PM	7/1/13 2:15 PM	0.347	1.50
2.65	2.45	040	Bethany Avenue	7/1/2013 12:45:00 PM	7/1/13 2:45 PM	0.271	2.00
2.65	2.45	041	Chestnut Street	7/1/2013 12:45:00 PM	7/1/13 2:45 PM	0.317	2.00
2.65	2.45	021A	Middle Siphon	7/1/2013 12:45:00 PM	7/1/13 7:45 PM	1.726	7.00
2.65	2.45	021B	Emerson Street	7/1/2013 12:45:00 PM	7/1/13 3:00 PM	0.186	2.25
2.65	2.45	021D	Little River North	7/1/2013 12:45:00 PM	7/2/13 2:00 AM	1.924	13.25
2.65	2.45	021E	Little River South	7/1/2013 12:45:00 PM	7/1/13 4:45 PM	0.338	4.00
2.65	2.45	039	South Webster	7/1/2013 1:00:00 PM	7/1/13 2:30 PM	0.029	1.50
2.65	2.45	013	Lower Siphon	7/1/2013 1:45:00 PM	7/1/13 5:00 PM	5.597	3.25
2.65	2.45	038	High Street	7/1/2013 3:15:00 PM	7/1/13 3:30 PM	0.000	0.25
2.65	2.45	024	Upper Siphon	7/1/2013 3:30:00 PM	7/1/13 5:15 PM	0.560	1.75
2.65	2.45	021H	Winter St./Hale St.	7/1/2013 3:30:00 PM	7/1/13 3:45 PM	0.001	0.25
0.07	1.05	032	Bradford Avenue	7/8/2013 7:00:00 PM	7/8/13 8:00 PM	0.774	1.00
0.07	1.05	034	Middlesex Street	7/8/2013 7:00:00 PM	7/8/13 7:30 PM	0.075	0.50



WWTP RG - Daily Rainfall Total (inches)	City RG - Daily Rainfall Total (inches)	NPDES ID	CSO Name	Start Date & Time	End Date & Time	Volume (MG)	Duration (hours)
0.07	1.05	040	Bethany Avenue	7/8/2013 7:00:00 PM	7/8/13 7:45 PM	0.128	0.75
0.07	1.05	041	Chestnut Street	7/8/2013 7:00:00 PM	7/8/13 7:45 PM	0.149	0.75
0.07	1.05	021A	Middle Siphon	7/8/2013 7:00:00 PM	7/8/13 9:15 PM	0.574	2.25
0.07	1.05	021B	Emerson Street	7/8/2013 7:00:00 PM	7/8/13 7:45 PM	0.042	0.75
0.07	1.05	021D	Little River North	7/8/2013 7:00:00 PM	7/8/13 9:45 PM	0.689	2.75
0.07	1.05	021E	Little River South	7/8/2013 7:00:00 PM	7/8/13 8:30 PM	0.136	1.50
0.07	1.05	024	Upper Siphon	7/8/2013 7:15:00 PM	7/8/13 8:00 PM	0.113	0.75
0.07	1.05	039	South Webster	7/8/2013 7:15:00 PM	7/8/13 7:45 PM	0.020	0.50
0.07	1.05	038	High Street	7/8/2013 7:15:00 PM	7/8/13 7:30 PM	0.000	0.25
0.07	1.05	013	Lower Siphon	7/8/2013 7:30:00 PM	7/8/13 8:30 PM	2.000	1.00
0.05	1.34	032	Bradford Avenue	7/23/2013 8:30:00 AM	7/23/13 11:00 AM	0.552	2.50
0.05	1.34	021A	Middle Siphon	7/23/2013 9:00:00 AM	7/23/13 12:00 PM	0.298	3.00
0.05	1.34	021D	Little River North	7/23/2013 9:00:00 AM	7/23/13 2:45 PM	0.323	5.75
0.05	1.34	040	Bethany Avenue	7/23/2013 1:30:00 PM	7/23/13 2:15 PM	0.041	0.75
0.05	1.34	041	Chestnut Street	7/23/2013 1:30:00 PM	7/23/13 2:15 PM	0.053	0.75
0.05	1.34	021E	Little River South	7/23/2013 1:30:00 PM	7/23/13 3:00 PM	0.033	1.50
0.05	1.34	021B	Emerson Street	7/23/2013 1:45:00 PM	7/23/13 2:15 PM	0.014	0.50
0.43	0.85	032	Bradford Avenue	8/2/2013 5:15:00 AM	8/2/13 7:00 AM	0.274	1.75
0.43	0.85	021D	Little River North	8/2/2013 5:30:00 AM	8/2/13 8:30 AM	0.074	3.00
0.43	0.85	021A	Middle Siphon	8/2/2013 5:45:00 AM	8/2/13 8:00 AM	0.181	2.25
0.43	0.85	021E	Little River South	8/2/2013 5:45:00 AM	8/2/13 7:00 AM	0.013	1.25
0.43	0.85	041	Chestnut Street	8/2/2013 6:00:00 AM	8/2/13 6:15 AM	0.000	0.25
-	1.09	032	Bradford Avenue	8/9/2013 3:00:00 PM	8/9/13 4:45 PM	0.245	1.75
-	1.09	041	Chestnut Street	8/9/2013 3:15:00 PM	8/9/13 3:30 PM	0.001	0.25
-	1.09	021A	Middle Siphon	8/9/2013 3:15:00 PM	8/9/13 7:00 PM	0.229	3.75
-	1.09	021D	Little River North	8/9/2013 3:15:00 PM	8/9/13 7:30 PM	0.091	4.25
-	1.09	021E	Little River South	8/9/2013 3:15:00 PM	8/9/13 4:15 PM	0.015	1.00
1.20	1.11	032	Bradford Avenue	9/2/2013 7:45:00 AM	9/2/13 9:30 AM	0.563	1.75
1.20	1.11	041	Chestnut Street	9/2/2013 3:15:00 PM	9/2/13 4:00 PM	0.079	0.75
1.20	1.11	021D	Little River North	9/2/2013 3:30:00 PM	9/2/13 6:15 PM	0.370	2.75
1.20	1.11	034	Middlesex Street	9/2/2013 3:45:00 PM	9/2/13 4:00 PM	0.033	0.25
1.20	1.11	040	Bethany Avenue	9/2/2013 3:45:00 PM	9/2/13 4:15 PM	0.065	0.50
1.20	1.11	021A	Middle Siphon	9/2/2013 3:45:00 PM	9/2/13 5:45 PM	0.422	2.00
1.20	1.11	021B	Emerson Street	9/2/2013 3:45:00 PM	9/2/13 4:15 PM	0.026	0.50
1.20	1.11	021E	Little River South	9/2/2013 3:45:00 PM	9/2/13 5:00 PM	0.037	1.25
1.20	1.11	013	Lower Siphon	9/2/2013 4:15:00 PM	9/2/13 5:30 PM	1.139	1.25
0.01	1.01	032	Bradford Avenue	9/12/2013 10:15:00 PM	9/13/13 12:30 AM	0.506	2.25
0.01	1.01	041	Chestnut Street	9/12/2013 10:15:00 PM	9/12/13 11:00 PM	0.018	0.75
0.01	1.01	021D	Little River North	9/12/2013 10:15:00 PM	9/13/13 2:00 AM	0.269	3.75
0.01	1.01	040	Bethany Avenue	9/12/2013 10:30:00 PM	9/12/13 11:00 PM	0.009	0.50
0.01	1.01	021A	Middle Siphon	9/12/2013 10:30:00 PM	9/13/13 1:30 AM	0.361	3.00
0.01	1.01	021E	Little River South	9/12/2013 10:30:00 PM	9/13/13 12:45 AM	0.043	2.25
0.01	1.01	013	Lower Siphon	9/12/2013 11:45:00 PM	9/13/13 1:00 AM	0.626	1.25
1.30	0.43	032	Bradford Avenue	9/13/2013 2:45:00 PM	9/13/13 3:30 PM	0.117	0.75
1.30	0.43	021D	Little River North	9/13/2013 3:00:00 PM	9/13/13 4:30 PM	0.003	1.50
1.30	0.43	021A	Middle Siphon	9/13/2013 3:15:00 PM	9/13/13 4:15 PM	0.028	1.00
0.59	0.68	032	Bradford Avenue	9/22/2013 6:15:00 AM	9/22/13 7:45 AM	0.323	1.50
0.59	0.68	040	Bethany Avenue	9/22/2013 6:15:00 AM	9/22/13 6:45 AM	0.004	0.50
0.59	0.68	041	Chestnut Street	9/22/2013 6:15:00 AM	9/22/13 6:45 AM	0.014	0.50
0.59	0.68	021A	Middle Siphon	9/22/2013 6:30:00 AM	9/22/13 9:00 AM	0.160	2.50
0.59	0.68	021D	Little River North	9/22/2013 6:30:00 AM	9/22/13 9:00 AM	0.060	2.50
0.59	0.68	021E	Little River South	9/22/2013 6:30:00 AM	9/22/13 7:30 AM	0.014	1.00
0.12	0.26	032	Bradford Avenue	11/18/2013 7:00:00 AM	11/18/13 7:30 AM	0.016	0.50
0.22	0.41	032	Bradford Avenue	11/22/2013 1:15:00 PM	11/22/13 1:45 PM	0.110	0.50
0.22	0.41	041	Chestnut Street	11/22/2013 1:15:00 PM	11/22/13 1:30 PM	0.003	0.25
0.22	0.41	021A	Middle Siphon	11/22/2013 1:30:00 PM	11/22/13 2:30 PM	0.030	1.00
0.22	0.41	021D	Little River North	11/22/2013 1:30:00 PM	11/22/13 3:00 PM	0.005	1.50
0.69	1.40	032	Bradford Avenue	11/27/2013 2:15:00 AM	11/27/13 4:00 AM	0.078	1.75
0.69	1.40	021A	Middle Siphon	11/27/2013 2:45:00 AM	11/27/13 9:00 AM	0.078	6.25
0.69	1.40	021D	Little River North	11/27/2013 9:45:00 AM	11/27/13 11:00 AM	0.000	1.25
1.12	1.09	032	Bradford Avenue	12/29/2013 7:30:00 PM	12/29/13 10:15 PM	0.314	2.75
1.12	1.09	021A	Middle Siphon	12/29/2013 7:45:00 PM	12/29/13 11:30 PM	0.210	3.75
1.12	1.09	021D	Little River North	12/29/2013 8:00:00 PM	12/30/13 1:15 AM	0.121	5.25
1.12	1.09	021E	Little River South	12/29/2013 8:15:00 PM	12/29/13 10:15 PM	0.027	2.00
<b>40.69</b>	<b>35.60</b>					<b>32.127</b>	

Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
1/1/2013				
1/2/2013				
1/3/2013				
1/4/2013				
1/5/2013				
1/6/2013				
1/7/2013				
1/8/2013				
1/9/2013				
1/10/2013				
1/11/2013	0.12	0.08	6.75	0.02
1/12/2013	0.02	0.04	0.50	0.04
1/13/2013	0.01	0.04	0.25	0.04
1/14/2013				
1/15/2013				
1/16/2013	0.05	0.04	5.50	0.01
1/17/2013	0.40	0.36	4.00	0.10
1/18/2013				
1/19/2013				
1/20/2013				
1/21/2013				
1/22/2013				
1/23/2013				
1/24/2013				
1/25/2013				
1/26/2013				
1/27/2013				
1/28/2013				
1/29/2013	0.23	0.28	1.50	0.15
1/30/2013	0.08	0.04	9.75	0.01
1/31/2013	0.30	0.12	11.75	0.03
2/1/2013				
2/2/2013				
2/3/2013				
2/4/2013				
2/5/2013				
2/6/2013	0.01	0.04	0.25	0.04
2/7/2013				
2/8/2013				
2/9/2013				
2/10/2013	0.22	0.28	1.25	0.18
2/11/2013	0.27	0.16	11.75	0.02
2/12/2013				
2/13/2013				
2/14/2013				
2/15/2013				
2/16/2013				
2/17/2013				
2/18/2013				
2/19/2013	0.29	0.16	5.25	0.06
2/20/2013				
2/21/2013				
2/22/2013				
2/23/2013	0.46	0.08	19.75	0.02
2/24/2013				
2/25/2013	0.22	0.20	2.25	0.10
2/26/2013				
2/27/2013	1.29	0.20	20.50	0.06

Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
2/28/2013				
3/1/2013				
3/2/2013				
3/3/2013				
3/4/2013				
3/5/2013				
3/6/2013	0.47	0.08	35.25	0.01
3/7/2013				
3/8/2013	0.45	0.44	2.50	0.18
3/9/2013				
3/10/2013				
3/11/2013				
3/12/2013	0.27	0.16	5.25	0.05
3/13/2013				
3/14/2013				
3/15/2013				
3/16/2013				
3/17/2013				
3/18/2013				
3/19/2013	0.26	0.12	5.00	0.05
3/20/2013	0.02	0.08	0.50	0.08
3/21/2013	0.01	0.04	0.25	0.04
3/22/2013				
3/23/2013				
3/24/2013				
3/25/2013				
3/26/2013				
3/27/2013				
3/28/2013	0.02	0.04	1.50	0.01
3/29/2013				
3/30/2013				
3/31/2013				
4/1/2013	0.23	0.08	7.75	0.03
4/2/2013				
4/3/2013				
4/4/2013				
4/5/2013				
4/6/2013				
4/7/2013				
4/8/2013				
4/9/2013	0.06	0.16	1.00	0.06
4/10/2013	0.11	0.16	1.75	0.06
4/11/2013	0.41	0.28	10.50	0.04
4/12/2013	0.44	0.16	16.50	0.03
4/13/2013				
4/14/2013				
4/15/2013				
4/16/2013				
4/17/2013				
4/18/2013				
4/19/2013				
4/20/2013	0.43	0.32	7.50	0.06
4/21/2013				
4/22/2013				
4/23/2013				
4/24/2013	0.11	0.04	17.00	0.01
4/25/2013	0.03	0.12	0.25	0.12
4/26/2013				



Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
4/27/2013				
4/28/2013				
4/29/2013				
4/30/2013				
5/1/2013				
5/2/2013				
5/3/2013				
5/4/2013				
5/5/2013				
5/6/2013				
5/7/2013				
5/8/2013	0.10	0.32	0.50	0.20
5/9/2013	0.59	0.44	16.25	0.08
5/10/2013				
5/11/2013	0.14	0.24	2.00	0.13
5/12/2013	0.06	0.04	3.50	0.02
5/13/2013				
5/14/2013				
5/15/2013	0.01	0.04	0.25	0.04
5/16/2013				
5/17/2013				
5/18/2013				
5/19/2013	0.24	0.12	9.25	0.03
5/20/2013				
5/21/2013	0.91	0.76	10.00	0.09
5/22/2013	0.06	0.08	9.25	0.01
5/23/2013	0.39	0.36	8.25	0.09
5/24/2013	0.72	0.20	29.75	0.02
5/25/2013				
5/26/2013	0.10	0.20	4.00	0.03
5/27/2013				
5/28/2013				
5/29/2013	0.46	0.32	15.50	0.06
5/30/2013				
5/31/2013				
6/1/2013				
6/2/2013	0.03	0.04	0.75	0.04
6/3/2013	0.37	0.36	5.00	0.07
6/4/2013				
6/5/2013				
6/6/2013				
6/7/2013	0.03	0.04	1.25	0.02
6/8/2013	2.60	0.72	23.75	0.11
6/9/2013				
6/10/2013	1.04	0.28	13.75	0.08
6/11/2013	0.36	0.52	1.75	0.21
6/12/2013	0.06	0.08	3.00	0.02
6/13/2013	0.97	0.16	19.50	0.05
6/14/2013				
6/15/2013				
6/16/2013				
6/17/2013	0.06	0.08	1.25	0.05
6/18/2013	0.41	0.40	5.50	0.07
6/19/2013	0.01	0.04	0.25	0.04
6/20/2013				
6/21/2013				
6/22/2013				
6/23/2013	0.01	0.04	0.25	0.04

Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
<b>6/24/2013</b>	0.47	1.24	3.30	0.46
6/25/2013	0.52	0.96	5.00	0.10
6/26/2013	0.32	0.64	3.50	0.09
6/27/2013	0.37	0.28	19.75	0.02
6/28/2013				
6/29/2013				
6/30/2013				
7/1/2013	2.45	2.24	7.00	0.35
7/2/2013	0.02	0.04	0.75	0.03
7/3/2013				
7/4/2013				
7/5/2013				
7/6/2013				
7/7/2013				
7/8/2013	1.05	1.60	1.50	0.70
7/9/2013				
<b>7/10/2013</b>	0.03	0.12	0.50	0.12
7/11/2013	0.11	0.20	1.50	0.07
7/12/2013				
7/13/2013				
7/14/2013				
7/15/2013				
7/16/2013				
7/17/2013				
7/18/2013				
7/19/2013				
7/20/2013				
7/21/2013				
7/22/2013				
7/23/2013	1.34	1.12	13.50	0.10
7/24/2013				
7/25/2013	0.21	0.08	16.00	0.01
7/26/2013	0.07	0.08	1.75	0.04
7/27/2013				
7/28/2013	0.01	0.04	0.25	0.04
7/29/2013	0.07	0.24	1.75	0.04
7/30/2013				
7/31/2013				
8/1/2013	0.72	0.48	9.25	0.08
<b>8/2/2013</b>	0.15	0.56	0.50	0.30
8/3/2013				
8/4/2013	0.09	0.28	0.50	0.18
8/5/2013				
8/6/2013				
8/7/2013				
8/8/2013	0.03	0.08	1.00	0.03
8/9/2013	1.09	0.52	9.75	0.11
8/10/2013				
8/11/2013				
8/12/2013				
8/13/2013	0.02	0.04	0.25	0.08
8/14/2013				
8/15/2013				
8/16/2013				
8/17/2013				
8/18/2013				
8/19/2013				
8/20/2013				

Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
8/21/2013				
8/22/2013				
8/23/2013				
8/24/2013				
8/25/2013				
8/26/2013				
8/27/2013				
8/28/2013				
8/29/2013				
8/30/2013				
8/31/2013	0.05	0.04	3.50	0.01
9/1/2013				
9/2/2013	1.11	1.76	9.00	0.12
9/3/2013	0.02	0.04	0.75	0.03
9/4/2013				
9/5/2013				
9/6/2013				
9/7/2013				
9/8/2013				
9/9/2013				
9/10/2013	0.12	0.20	0.75	0.16
9/11/2013				
<b>9/12/2013</b>	<b>1.44</b>	<b>0.84</b>	<b>19.00</b>	<b>0.16</b>
9/13/2013				
9/14/2013				
9/15/2013	0.01	0.04	0.25	0.04
9/16/2013	0.01	0.04	0.25	0.04
9/17/2013				
9/18/2013				
9/19/2013				
9/20/2013	0.01	0.04	0.25	0.04
9/21/2013	0.01	0.04	0.25	0.04
9/22/2013	0.68	1.12	10.00	0.07
9/23/2013				
9/24/2013				
9/25/2013				
9/26/2013				
9/27/2013				
9/28/2013				
9/29/2013	0.01	0.04	0.25	0.04
9/30/2013	0.01	0.04	0.25	0.04
10/1/2013	0.01	0.04	0.25	0.04
10/2/2013				
10/3/2013				
10/4/2013	0.04	0.08	2.75	0.01
10/5/2013				
10/6/2013	0.43	0.16	21.75	0.02
10/7/2013	0.04	0.12	0.50	0.16
10/8/2013				
10/9/2013				
10/10/2013	0.01	0.04	0.25	0.04
10/11/2013				
10/12/2013	0.01	0.04	0.25	0.04
10/13/2013	0.01	0.04	0.25	0.04
10/14/2013	0.01	0.04	0.25	0.04
10/15/2013				
10/16/2013	0.01	0.04	0.25	0.04
10/17/2013				



Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
10/18/2013	0.09	0.08	3.00	0.03
10/19/2013				
10/20/2013				
10/21/2013				
10/22/2013				
10/23/2013				
10/24/2013				
10/25/2013				
10/26/2013				
10/27/2013	0.03	0.04	2.00	0.02
10/28/2013				
10/29/2013				
10/30/2013	0.05	0.04	0.75	0.07
10/31/2013	0.11	0.08	9.00	0.01
11/1/2013	0.01	0.04	0.25	0.04
11/2/2013				
11/3/2013	0.01	0.04	0.25	0.04
11/4/2013				
11/5/2013				
11/6/2013				
11/7/2013	0.15	0.08	5.75	0.03
11/8/2013	0.01	0.04	0.25	0.04
11/9/2013				
11/10/2013	0.07	0.28	0.25	0.28
11/11/2013				
11/12/2013				
11/13/2013				
11/14/2013				
11/15/2013				
11/16/2013				
11/17/2013	0.30	0.32	13.25	0.02
11/18/2013				
11/19/2013				
11/20/2013				
11/21/2013				
11/22/2013	0.41	0.84	7.25	0.06
11/23/2013				
11/24/2013				
11/25/2013				
11/26/2013	0.10	0.08	4.00	0.06
11/27/2013	1.49	0.32	9.00	0.17
11/28/2013	0.01	0.04	0.25	0.04
11/29/2013				
11/30/2013				
12/1/2013	0.10	0.08	9.25	0.01
12/2/2013	0.01	0.04	0.25	0.04
12/3/2013				
12/4/2013				
12/5/2013	0.01	0.04	0.25	0.04
12/6/2013	0.13	0.08	8.75	0.03
12/7/2013	0.15	0.08	4.00	0.04
12/8/2013	0.01	0.04	0.25	0.04
12/9/2013	0.06	0.04	5.50	0.01
12/10/2013	0.01	0.04	0.25	0.04
12/11/2013				
12/12/2013				
12/13/2013				
12/14/2013				

Appendix B: Rainfall Data for Calendar Year 2013

Storm Date	Rain Total (in.)	Peak Hour Depth Intensity	Duration (hours)	Daily Avg. Intensity
12/15/2013				
12/16/2013	0.03	0.04	2.00	0.02
12/17/2013	0.44	0.40	11.75	0.04
12/18/2013	0.02	0.04	1.25	0.02
12/19/2013				
12/20/2013				
12/21/2013				
12/22/2013	0.09	0.08	5.75	0.02
12/23/2013	0.45	0.16	12.50	0.04
12/24/2013				
12/25/2013				
12/26/2013	0.06	0.08	1.25	0.05
12/27/2013				
12/28/2013				
12/29/2013	1.09	0.32	7.75	0.14
12/30/2013				
12/31/2013				

APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS

Date	Rainfall (in.)/day	Peak Intensity (hr.)	BATES NPDES 001	BOARDMAN NPDES 010	LOWER SIPHON NPDES 013	FIRE STATION NPDES 016	MAIN ST NORTH NPDES 019 <sup>1</sup>	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	ORCHARD STREET NPDES 21-D	RAILROAD BRIDGE NPDES 022	266 RIVER STREET NPDES 023	BEACH STREET NPDES 025	UPPER SIPHON NPDES 024	WINTER ST NPDES 21-H	BROADWAY DIVERSIONAL NPDES 038	HIGH ST DIVERSIONAL NPDES 038	WINTER AND HALE NPDES 21-H	Bethany Street NPDES 040	Chestnut Street NPDES 041	FRONT STREET NPDES 031	BRADFORD AVE NPDES 032	SOUTH PROSPECT NPDES 033	MIDDLESEX STREET NPDES 034	MAIN ST SOUTH NPDES 035	FERRY STREET NPDES 036	Colby St & Salem Regulator NPDES 039	South Webster CSO	
1/1/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/2/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
1/3/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/6/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/7/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/8/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/9/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/10/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/11/2013	0.12	0.08	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/12/2013	0.02	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/13/2013	0.01	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/14/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/15/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/16/2013	0.05	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/17/2013	0.40	0.36	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/18/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/19/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/20/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/21/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/22/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/23/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/24/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/25/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/26/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/27/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/28/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/29/2013	0.23	0.28	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/30/2013	0.08	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
1/31/2013	0.30	0.12	0	0	0	0	0	0	0	0	1	1	Closed	0	0	0	0	0	0	1		0	0	0	1	0	1	0	1	1
2/1/2013	0.00	0.00	0	0	0	0	0	0	0	1	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/2/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/3/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/6/2013	0.01	0.04	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/7/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/8/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/9/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/10/2013	0.22	0.28	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/11/2013	0.27	0.16	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/12/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/13/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/14/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/15/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/16/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/17/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/18/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/19/2013	0.29	0.16	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/20/2013	0.00	0.00	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1		0	0	1	0	1	0	0	0	0
2/21/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/22/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/23/2013	0.46	0.08	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/24/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/25/2013	0.22	0.20	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/26/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/27/2013	1.29	0.20	0	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
2/28/2013	0.00	0.00	0																											



APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS

Date	Rainfall (in.)/day	Peak Intensity (hr.)	BATES NPDES 001	BOARDMAN NPDES 010	LOWER SIPHON NPDES 013	FIRE STATION NPDES 016	MAIN ST NORTH NPDES 019 <sup>1</sup>	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	ORCHARD STREET NPDES 21-D	RAILROAD BRIDGE NPDES 022	266 RIVER STREET NPDES 023	BEACH STREET NPDES 025	UPPER SIPHON NPDES 024	WINTER ST NPDES 21-H	BROADWAY DIVERSIONAL NPDES 038	HIGH ST DIVERSIONAL NPDES 038	WINTER AND HALE NPDES 21-H	Bethany Street NPDES 040	Chestnut Street NPDES 041	FRONT STREET NPDES 031	BRADFORD AVE NPDES 032	SOUTH PROSPECT NPDES 033	MIDDLESEX STREET NPDES 034	MAIN ST SOUTH NPDES 035	FERRY STREET NPDES 036	Colby St & Salem Regulator NPDES 039	South Webster CSO	
3/1/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/2/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/3/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/6/2013	0.47	0.08	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/7/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/8/2013	0.45	0.44	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/9/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/10/2013	0.00	0.00	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1			0	1	0	1	0	0	NA	1
3/11/2013	0.00	0.00	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1			0	1	0	1	0	0	NA	1	1
3/12/2013	0.27	0.16	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/13/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/14/2013	0.00	0.00	0	0	0	0	0	1	1	1	1	Closed	1	0	0	0	0	0	0	0			0	1	0	0	0	0	1	1
3/15/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/16/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/17/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/18/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/19/2013	0.26	0.12	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/20/2013	0.02	0.08	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/21/2013	0.01	0.04	0	0	0	0	0	0	0	1	0	Closed	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0
3/22/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/23/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/24/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/25/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/26/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/27/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/28/2013	0.02	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/29/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/30/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
3/31/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/1/2013	0.23	0.08	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1			0	0	0	1	0	0	NA	1
4/2/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/3/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/6/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/7/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/8/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/9/2013	0.06	0.16	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/10/2013	0.11	0.16	0	0	0	0	0	0	0	0	1	1	Closed	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/11/2013	0.41	0.28	0	0	0	0	0	0	1	1	1	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/12/2013	0.44	0.16	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/13/2013	0.00	0.00	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	0			0	1	0	0	0	0	0	0	1
4/14/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/15/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/16/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/17/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/18/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/19/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/20/2013	0.43	0.32	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	1
4/21/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/22/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/23/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/24/2013	0.11	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/25/2013	0.03	0.12	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/26/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/27/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0
4/28/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0</				

APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS

Date	Rainfall (in.)/day	Peak Intensity (hr.)	BATES NPDES 001	BOARDMAN NPDES 010	LOWER SIPHON NPDES 013	FIRE STATION NPDES 016	MAIN ST NORTH NPDES 019 <sup>1</sup>	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	ORCHARD STREET NPDES 21-D	RAILROAD BRIDGE NPDES 022	266 RIVER STREET NPDES 023	BEACH STREET NPDES 025	UPPER SIPHON NPDES 024	WINTER ST NPDES 21-H	BROADWAY DIVERSIONAL NPDES 038	HIGH ST DIVERSIONAL NPDES 038	WINTER AND HALE NPDES 21-H	Bethany Street NPDES 040	Chestnut Street NPDES 041	FRONT STREET NPDES 031	BRADFORD AVE NPDES 032	SOUTH PROSPECT NPDES 033	MIDDLESEX STREET NPDES 034	MAIN ST SOUTH NPDES 035	FERRY STREET NPDES 036	Colby St & Salem Regulator NPDES 039	South Webster CSO		
5/1/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/2/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/3/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	
5/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/6/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/7/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/8/2013	0.10	0.32	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0	0	
5/9/2013	0.59	0.44	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	1	0	0	0	1	1	0	1	0	1	0	0	1	1	
5/10/2013	0.00	0.00	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	1	0	0	0	1	1	0	1	0	1	0	0	1	1	
5/11/2013	0.14	0.24	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/12/2013	0.06	0.04	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	1	0	0	0	1	1	0	1	0	1	0	0	1	1	
5/13/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/14/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/15/2013	0.01	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/16/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/17/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/18/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/19/2013	0.24	0.12	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/20/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/21/2013	0.91	0.76	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/22/2013	0.06	0.08	0	0	0	0	0	0	0	1	0	0	Closed	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	1	1	
5/23/2013	0.39	0.36	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/24/2013	0.72	0.20	0	0	0	0	0	0	0	1	1	1	Closed	0	0	0	1	0	0	1	1	1	0	1	1	0	0	0	1	1	
5/25/2013	0.00	0.00	0	0	0	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	
5/26/2013	0.10	0.20	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/27/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/28/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/29/2013	0.46	0.32	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5/30/2013	0.00	0.00	0	0	0	0	0	0	0	1	1	1	Closed	0	0	0	1	0	0	1	1	1	0	1	1	0	0	0	1	1	
5/31/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/1/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/2/2013	0.03	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/3/2013	0.37	0.36	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
6/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/6/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/7/2013	0.03	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/8/2013	2.60	0.72	0	0	1	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0	1	1	
6/9/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/10/2013	1.04	0.28	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/11/2013	0.36	0.52	0	0	0	0	0	0	0	1	1	1	Closed	0	0	0	1	0	0	1	1	1	0	1	1	0	0	0	1	1	
6/12/2013	0.06	0.08	0	0	1	0	0	0	1	1	1	1	Closed	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0	0	0	0
6/13/2013	0.97	0.16	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/14/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/15/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/16/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/17/2013	0.06	0.08	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/18/2013	0.41	0.40	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/19/2013	0.01	0.04	0	0	0	0	0	0	0	1	1	1	Closed	0	0	0	0	1	1	1	1	1	0	1	0	1	0	0	1	1	
6/20/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/21/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/22/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/23/2013	0.01	0.04	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/24/2013	0.47	1.24	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6/25/2013	0.52	0.96	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
6/26/2013	0.32	0.64	0	0	0	0	0	0	0	1	1	1	Closed	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	1	1	
6/27/2013	0.37	0.28	0	0	0	0	0	0	0	1	1	1	Closed	0	0	0	0	0	1	1	1	1	1	1	0</						

APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS

Date	Rainfall (in.)/day	Peak Intensity (hr.)	BATES NPDES 001	BOARDMAN NPDES 010	LOWER SIPHON NPDES 013	FIRE STATION NPDES 016	MAIN ST NORTH NPDES 019	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	ORCHARD STREET NPDES 21-D	RAILROAD BRIDGE NPDES 022	266 RIVER STREET NPDES 023	BEACH STREET NPDES 025	UPPER SIPHON NPDES 024	WINTER ST NPDES 21-H	BROADWAY DIVERSIONAL NPDES 038	HIGH ST DIVERSIONAL NPDES 038	WINTER AND HALE NPDES 21-H	Bethany Street NPDES 040	Chestnut Street NPDES 041	FRONT STREET NPDES 031	BRADFORD AVE NPDES 032	SOUTH PROSPECT NPDES 033	MIDDLESEX STREET NPDES 034	MAIN ST SOUTH NPDES 035	FERRY STREET NPDES 036	Colby St & Salem Regulator NPDES 039	South Webster CSO
7/1/2013	2.45	2.24	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1
7/2/2013	0.02	0.04	0	0	0	0	0	0	1	1	1	Closed	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0
7/3/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/4/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/5/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/6/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/7/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/8/2013	1.05	1.60	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1
7/9/2013	0.00	0.00	0	0	0	0	0	0	1	1	1	Closed	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
7/10/2013	0.03	0.12	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/11/2013	0.11	0.20	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/12/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/13/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/14/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/15/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/16/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/17/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/18/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0
7/19/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/20/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/21/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/22/2013	0.00	0.00	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/23/2013	1.34	1.12	0	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	1	Closed	1	1	1	1	1
7/24/2013	0.00	0.00	Closed	0	1	1	1	1	1	1	1	Closed	0	0	1	1	1	1	1	1	1	Closed	0	Closed	0	0	0	0	0
7/25/2013	0.21	0.08	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	1	Closed	0	1	0	1	0
7/26/2013	0.07	0.08	Closed	0	0	0	0	0	0	0	0	Closed	1	0	1	1	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/27/2013	0.00	0.00	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/28/2013	0.01	0.04	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/29/2013	0.07	0.24	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/30/2013	0.00	0.00	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	0	0	0	0
7/31/2013	0.00	0.00	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	0	0	0
8/1/2013	0.72	0.48	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	0	0	0
8/2/2013	0.15	0.56	Closed	0	0	0	1	0	1	1	1	Closed	0	0	1	0	0	0	1	1	1	Closed	1	Closed	0	Closed	0	0	0
8/3/2013	0.00	0.00	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	0	0	0
8/4/2013	0.09	0.28	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	0	0	0
8/5/2013	0.00	0.00	Closed	0	0	0	0	0	0	1	0	Closed	1	0	0	0	0	0	0	0	0	Closed	1	Closed	0	Closed	Closed	0	1
8/6/2013	0.00	0.00	Closed	0	0	0	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/7/2013	0.00	0.00	Closed	0	0	Closed	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/8/2013	0.03	0.08	Closed	0	0	Closed	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/9/2013	1.09	0.52	Closed	0	0	Closed	0	0	0	0	0	Closed	0	0	0	0	0	0	1	0	0	Closed	1	Closed	0	Closed	Closed	0	1
8/10/2013	0.00	0.00	Closed	0	0	Closed	1	0	0	1	1	Closed	0	0	1	0	0	0	0	1	1	Closed	0	Closed	0	Closed	Closed	0	0
8/11/2013	0.00	0.00	Closed	0	0	Closed	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/12/2013	0.00	0.00	Closed	0	0	Closed	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/13/2013	0.02	0.04	Closed	0	0	Closed	0	0	0	0	0	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/14/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/15/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/16/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/17/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/18/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/19/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/20/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/21/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/22/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/23/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/24/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/25/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/26/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/27/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/28/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
8/29/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	C																



APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS

Date	Rainfall (in.)/day	Peak Intensity (hr.)	BATES NPDES 001	BOARDMAN NPDES 010	LOWER SIPHON NPDES 013	FIRE STATION NPDES 016	MAIN ST NORTH NPDES 019 <sup>1</sup>	MIDDLE SIPHON NPDES 21-A	LITTLE RIVER NORTH 12-INCH NPDES 21-D	LITTLE RIVER SOUTH 18-INCH NPDES 21-E	ORCHARD STREET NPDES 21-D	RAILROAD BRIDGE NPDES 022	266 RIVER STREET NPDES 023	BEACH STREET NPDES 025	UPPER SIPHON NPDES 024	WINTER ST NPDES 21-H	BROADWAY DIVERSIONAL NPDES 038	HIGH ST DIVERSIONAL NPDES 038	WINTER AND HALE NPDES 21-H	Bethany Street NPDES 040	Chestnut Street NPDES 041	FRONT STREET NPDES 031	BRADFORD AVE NPDES 032	SOUTH PROSPECT NPDES 033	MIDDLESEX STREET NPDES 034	MAIN ST SOUTH NPDES 035	FERRY STREET NPDES 036	Colby St & Salem Regulator NPDES 039	South Webster CSO	
9/12/2013	1.44	0.84	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0	
9/13/2013	0.00	0.00	Closed	Closed	0	Closed	1	0	1	1	1	Closed	Closed	0	1	0	0	0	1	1	1	1	Closed	1	Closed	0	Closed	Closed	1	1
9/14/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/15/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/16/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/17/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/18/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/19/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/20/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/21/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/22/2013	0.68	1.12	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/23/2013	0.00	0.00	Closed	Closed	0	Closed	1	0	1	1	1	Closed	Closed	0	1	0	0	0	1	1	1	1	Closed	1	Closed	1	Closed	Closed	1	1
9/24/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/25/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/26/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/27/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/28/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/29/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
9/30/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/1/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/2/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/3/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/4/2013	0.04	0.08	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/5/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/6/2013	0.43	0.16	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/7/2013	0.04	0.12	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/8/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/9/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/10/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/11/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/12/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/13/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/14/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/15/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/16/2013	0.01	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/17/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/18/2013	0.09	0.08	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/19/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/20/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/21/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/22/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/23/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/24/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/25/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/26/2013	0.00	0.00	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/27/2013	0.03	0.04	Closed	Closed	0	Closed	0	0	0	0	0	Closed	Closed	0	0	0	0	0	0	0	0	0	Closed	0	Closed	0	Closed	Closed	0	0
10/28/2013	0.00	0.00	Closed	Closed</																										

## APPENDIX C: CALENDAR YEAR 2013 CSO BLOCK CHECK RESULTS

Block in wrong location CSO may be incorrect

## CHECK CSO SIGNAGE

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

<u>Craft</u>	<u>Estimated Crew Size</u>	<u>Estimated Labor Hours</u>
COLL-REG	4.00	28.00

Equipment No. -

Equipment Description

Serial No.

Cost Center

General Ledger Code

Department

Location CITY WIDE

Sub-location 1 -

Sub-location 2 -

Sub-location 3 -

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. PREVIOUSLY ADDED SIGN AT S. WEBSTER.

User-defined field 1

User-defined field 2

User-defined field 3

User-defined field 4

User-defined field 5

User-defined field 6

User-defined field 7

User-defined field 8

User-defined field 9

User-defined field 10

<u>Equipment No. (Meter)</u>	<u>Meter Name</u>	<u>Meter Reading</u>
------------------------------	-------------------	----------------------

Item No.	Equipment No. (Parts)	Item Description	Qty Required	Date Used	Qty Used
----------	-----------------------	------------------	--------------	-----------	----------

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 Notification<sup>1</sup>

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

Changed

Changed

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