

**2014 Annual Report  
National Pollutant Discharge Elimination System**

FOR THE

CITY OF CAMBRIDGE, MASSACHUSETTS  
COMBINED SEWER OVERFLOW PERMIT  
#MA0101974

April 2015

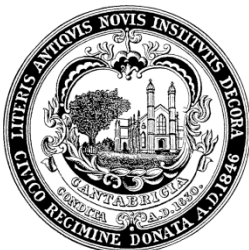
Submitted to:

U.S. Environmental Protection Agency  
Water Technical Unit

MA Department of Environmental Protection  
Bureau of Resource Protection

Submitted by:

City of Cambridge  
Department of Public Works



*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Richard C Rossi

Signature of Authorized Official: Richard Rossi  
City Manager, City of Cambridge

4/30/15

Date

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## **1.0 Purpose of Report**

This report has been prepared in accordance with Part I, Section D of Permit No. MA0101974, issued to the City of Cambridge Department of Public Works on September 30, 2009. The permit authorizes the City of Cambridge to discharge flow from twelve (12) Combined Sewer Overflows (CSO) located in eleven (11) regulator structures to the receiving water bodies named in the permit.

## 2.0 Combined Sewer Overflow Monitoring Plan

As part of the Year 1 Annual Report, the City revised weir equations for use in estimating combined sewer overflow quantities at the various regulators. During Year 2 (2010), the City further refined these results using model simulations where CSO activations are impacted by the river systems. For Year 3 (2011) and Year 5 (2013), the City continued to refine the results using model simulations of rainfall from the typical year and the current year to help determine the course of action for the CSO regulating structures.

Section 2.1 describes the existing methodology by which the City estimates effluent volumes and characterizes CSO events. Section 2.2 presents data from the calendar year of 2014 based on this approach, and Section 2.3 describes recommended enhancements and reporting methodology to be utilized by the City going forward.

### 2.1 Existing CSO Monitoring Methodology

As part of the City’s current NPDES Permit, the Department of Public Works (DPW) monitors flow weirs within combined sewer overflow regulator structures to estimate CSO discharge to the Charles River and Alewife Brook. Currently, there are 12 permitted CSO locations associated with 11 CSO regulator structures.

**Table 2.1**  
**Summary of Combined Sewer Locations**

<b>Regulator Structure</b>	<b>CSO Location</b>	<b>Locus</b>	<b>Statuses</b>
CAM 001	CAM 001	Alewife Brook Parkway	Open
CAM 002	CAM 002A	Massachusetts Ave. at Alewife Brook Parkway	Open
	CAM 002B <sup>2</sup>	Massachusetts Ave. at Alewife Brook Parkway	Closed
CAM 004 <sup>1</sup>	CAM 004	Fresh Pond Rotary	Open
CAM 400	CAM 400	Alewife Brook Parkway and Harrison Avenue	Closed <sup>3</sup>
CAM 401A	CAM 401A	Bellis Circle/Sherman Street	Open
CAM 401B	CAM 401B	Massachusetts Ave. at Alewife Brook Parkway	Open
CAM 005	CAM 005	Mount Auburn Hospital	Open
CAM 007	CAM 007	Memorial Drive at Hawthorne Street	Open
CAM 009	CAM 009	Memorial Dr. at Old Murray Rd.	Closed <sup>4</sup>
CAM 011	CAM 011	Plympton St.	Closed <sup>4</sup>
CAM 017	CAM 017	Binney Street at First Street	Open

<sup>1</sup> To be closed by December 31, 2015

<sup>2</sup> To be open by December 31, 2015

<sup>3</sup> Permanently closed on March 31, 2011

<sup>4</sup> City retains the right to re-open once a hydraulic study is completed

Metering is typically performed by measuring the depth of flow in the structure and computing discharge using a weir equation. In addition, CAM 002A and CAM 005 have secondary area and velocity flow measuring devices in place at the CSO outfall pipe to accurately determine the CSO overflow discharge.

**Weir Equation:** Currently the City uses the following rectangular contracted weir equation as provided by the flow meter manufacturer to compute flow over a standard weir:

$$Q = K(l - 0.2h)h^{1.5}$$

Where:

$Q$  is flow measured in cubic feet per second (CFS)

$l$  is the weir crest length in feet

$K$  is the weir coefficient equal to 3.330, when  $1 \leq l \leq 10$  feet

$h$  is the head on the weir in feet, the limits of which vary according to  $l$  as follows:

<u>Weir Length <math>l</math> (ft.)</u>	<u><math>h</math> minimum (ft.)</u>	<u><math>h</math> maximum (ft.)</u>
1	0.2	0.5
1.5	0.2	0.75
2	0.2	1.0
2.5	0.2	1.25
3	0.2	1.5
4	0.2	2.0
5	0.2	2.5
6	0.2	3.0
8	0.2	4.0
10	0.2	4.5

The CSO regulator weir crest lengths as reported under existing conditions are:

<u>Location</u>	<u>Weir Length (ft.)</u>
CAM 001 (Alewife Brook Pkwy)	1.46
CAM 002A (Massachusetts Ave at Alewife Brook Pkwy)	5.00
CAM 004 (Fresh Pond Rotary)	7.50
CAM 400 (Harrison Ave at Alewife Brook Pkwy)	7.48
CAM 401A (Bellis Circle at Sherman Street)	19.96
CAM 401B (Massachusetts Ave at Alewife Brook Pkwy)	6.00
CAM 005 (Mount Auburn Hospital)	3.94
CAM 007 (Memorial Drive at Hawthorne Street)	6.29
CAM 017 (Binney Street at First Street)	8.00

The summary of CSO activations for 2014, which follows is based on activation and quantification results based on weir equations, flow measuring devices and modeling software (Infoworks) in use during 2014.

## **2.2 Summary of 2014 CSO Activations**

### **Activation Frequency and Discharge Volumes**

Based on the monitoring procedures described above, six (6) total activations occurred at Charles River CSO regulators during two (2) separate storm events. Forty one (41) total activations occurred at Alewife Brook CSO regulators during fourteen (14) separate storm events. A summary of 2014 activations are provided in Table 2.2 and 2.3 for the Charles River and Alewife Brook, respectively.

Precipitation data for each day of the 2014 reporting period is provided in monthly tables in **Appendix I**. In conformance with permit requirements under Part 1, Section D, Paragraph 2, data is provided for each day, including total rainfall, peak intensity, and average intensity. The monthly CSO volume data sheets are provided in **Appendix II**.

**Table 2.2  
Summary of 2014 Activations  
Charles River CSOs**

Receiving Water	Outfall No.	Discharge Location	2014 Activation Frequency	2014 Activation Volume (million gallons)
Charles River	CAM005	Lowell St. @ Mt. Auburn St.	2	0.97
	CAM007	Memorial Dr. @ Hawthorne St.	2	0.23
	CAM009	Memorial Dr. @ Old Murray Rd.	0	0.00
	CAM011	Plympton St.	0	0.00
	CAM017	Edwin Land Blvd. @ Binney St.	2	5.50
	<b>TOTAL</b>			
* CAM009 and CAM011 are temporarily blocked				

**Table 2.3  
Summary of 2014 Activations  
Alewife Brook CSOs**

Receiving Water	Outfall No.	Discharge Location	2014 Activation Frequency	2014 Activation Volume (million gallons)
Alewife Brook	CAM001	Foch St. @ Alewife Brook Pkwy.	7	.02
	CAM002A CAM002B <sup>1</sup>	Mass Ave. @ Alewife Brook Pkwy	11	5.93
	CAM004	Concord Ave. Rotary @ Fresh Pond Pkwy	9	84.84
	CAM400 <sup>2</sup>	Harrison Ave. @ Alewife Brook Pkwy	0	0.00
	CAM401A	Sherman St. @ B&M Railroad	4	21.88
	CAM401B	Mass Ave./Columbus Ave. @ Alewife Brook Pkwy	10	21.98
	<b>TOTAL</b>			
<sup>1</sup> CAM002B is temporarily closed. <sup>2</sup> CAM400 was permanently closed on March 31, 2011.				

### **2.3 Modifications to CSO Monitoring Plan**

The purpose of this analysis is to evaluate the current monitoring plan and to improve upon it, if possible, by modifying the present metering approach, improving CSO activation reporting under the current NPDES permit.

#### **CSO Regulator Structures**

The methodology used to calculate overflows at each regulator structure has been reviewed and evaluated as described below. Where appropriate, revisions to existing calculation methodology are proposed. In addition, calculations will continue to be updated based on field investigations in order to reflect current field conditions.

#### **CAM 001**

The permitted configuration for CAM 001 consisted of an 18” overflow pipe with a steel plate at the end. The plate covered the bottom portion of the 18” pipe. The top of the steel plate was 5-3/4 inches below the crown of the 18” pipe. This created a restricted 70.6 square inch opening with an overflow elevation of 15.22 Feet (NGVD).



The final configuration for CAM 001 consists of a 10” PVC pipe outlet with a 15” PVC elbow for floatable controls. There is also a brick weir set as elevation 15.22 Feet (NGVD).

Hydraulic backwater computations on both the permitted configuration based on the 18” pipe and on the modified configuration using the brick weir with the 10” pipe were performed. The analysis indicates that for flows up to four (4) CFS, the performances of the two (2) configurations are almost identical. For flows through the outfall pipe slightly greater than four (4) CFS, the hydraulic grade line will be greater than the rim elevation of the manholes and combined sewage will escape the sewer system and flow overland to the Brook, however this situation has not been observed in any combined sewer event. To determine the possibility of the structure being over topped a 100-year rain storm was run through the hydraulic model and showed that a flow over 10 cfs will remain approximately 1.0-foot below the rim elevation of the CAM 001.

#### CAM 002A

A standard weir equation was used to calculate the CSO activation volume for each storm.

$$Q = 3.33*(L-0.2*h)*(h)^{1.5}$$

The above formula will be used to calculate overflow volumes for all flows below 2.5-feet above the weir elevation of 17.3-ft (CCB). Beyond that, Infoworks will be used to calculate all flows.

#### CAM 004

This CSO is located within a drainage confluence structure called Drain Vault 5 within the Alewife Brook Rotary at the junction of Concord Avenue and The Alewife Brook Parkway. The weir structure within this CSO is a complex weir with the lowest weir having a length of 7.5 ft and being perpendicular to the direction of flow, the two higher weirs are aligned parallel to the direction of flow and are eight (8) inches higher with a total weir length of an additional seventeen (17) feet.

After reviewing the data from the storms that occurred in 2011, the current multi-step weir equation was considered no longer valid. Instead, an Infoworks calibrated model was used to calculate the total amount of CSO’s that occurred at this structure. River elevations for the year are taken from a meter that was located inside of CAM 400 and translated to the outfall of CAM 004. The weir structure was modified to be two (2) separate weirs as described above. The heights or “h” values that were calculated by Infoworks were consistent with “h” values that the flow meter was reading.

#### **CAM 400 (Closed March 31, 2011)**

The downstream combined sewer system for CAM 400 was under construction as part of common manhole separation project (Contract 13) for part of the year (2012). This construction consisted of laying new storm sewer and sanitary sewer mains and separating common manholes. The work was completed in March 2012 and the CAM 400 CSO regulator was closed.

CAM 401A

Due to the complicated nature of this structure and the existing floatables control brush screen at the existing weir, an alternative weir equation was used for comparison to the standard equation. This configuration requires a weir coefficient of  $K = 2.4$  (based on information from the brush screen manufacturer) to replace the standard weir equation coefficient of 3.33. Consequently the equation used for this CSO structure overflow was:

$$Q = 2.4(l - 0.2h)h^{1.5}$$

The City will use this revised weir equation for future flow estimates. It should be noted that similar to other CSOs, this system will experience a backwater effect above the weir elevation for the 25-year storm event and above and will be subject to additional analysis when submitting annual reports.

CAM 401B

Due to the size of the outlet, a rectangular weir will be used up to an elevation of 1.4 feet above the bottom of the invert and an orifice equation will be used for all flows above 1.4 feet.

**Rectangular Weir**

$$Q = 3.33*(L-0.2*h)*(h)^{1.5}$$

**Orifice Equation**

$$Q = A*C_v*\sqrt{2*g*h_o}$$

The Infoworks modeling software will also be used to better understand the flows from the CSO regulator structure.

CAM 005

An area / velocity meter has been installed in the downstream overflow pipe, and it will continue to authenticate CSO overflows from the CAM 005 regulator instead of relying solely on the weir equations or model output. To determine flow values for CAM 005 the velocity meter and flow meter data was reviewed. When the velocities were positive a standard rectangular weir equation was used.

CAM 007

The standard weir equation is accurate in this scenario, and the City will continue to use this existing equation for flow approximation purposes.

CAM 007 has experienced significant inflow from the Charles River. The inflow typically does not affect the CSO outfall however during a 2012 storm event, a CSO event occurred while the Charles River was flowing into the system. Further studies of the inflow needs to be completed during the next several years to gain a better understanding of how this inflow affects the conveyance of CSO activities.

### CAM 017

The reconstruction of CAM017 has recently been completed. The new structure consists of 3 bending weirs that will allow flow to enter the Charles River once a certain elevation is achieved.

Due to the complexity of the bending weirs, flow conditions, and downstream and upstream conditions a standard weir equation is not adequate. Once an overflow has been detected a series of weir equations will be run based on the degree of rotation of the bending weir and elevation and velocity of the water. The rotation of the bending weir will be measured by a rotational meter and the elevation of the system will be measured by a depth probe. The bending weirs and associated equations will be validated once activation occurs. The results will be cross checked with the current Infoworks model to ensure that the overflow was properly detected.

## **2.4 Rainfall Characteristics**

Under the City of Cambridge Combined Sewer Overflow Permit MA0101974, the City must report daily rainfall totals, maximum intensity and average intensity.

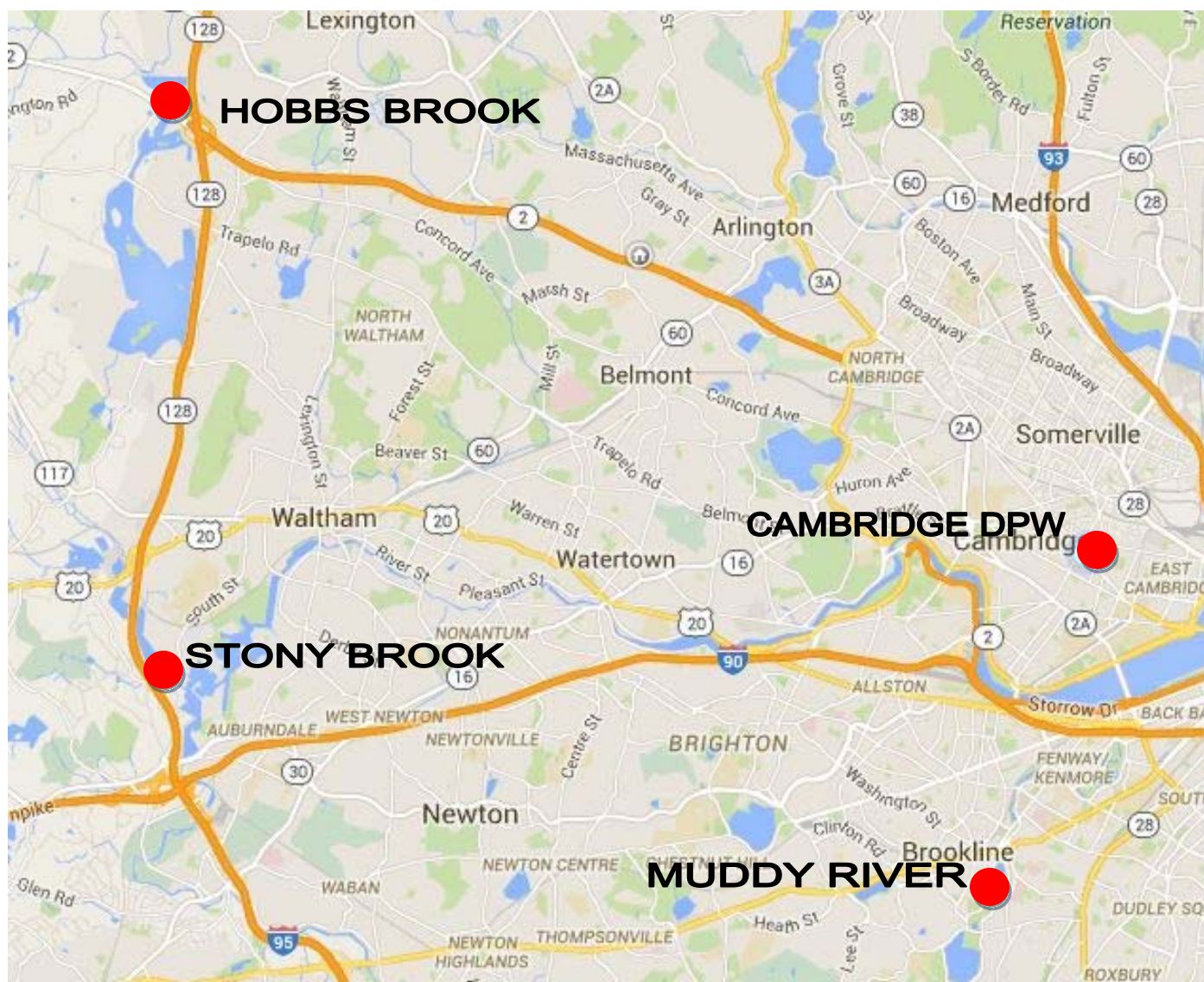
The City of Cambridge currently operates one (1) year round rainfall gauge. The gauge is located on the roof of the Department of Public Works, 147 Hampshire Street in Cambridge. The gauge had technical issues throughout the year and is not considered valid. The City also operates a seasonal gauge on the roof of the Cambridge DPW which produces information from April to mid-December. The results can be viewed in Appendix I

The City of Cambridge also utilizes three (3) active rain gauges located throughout the City. Two (2) meters are located near Fresh Pond. These gauges are the USGS gauge at Fresh Pond (USGS) and the Cambridge Water Department (CWD) Gauge. The CWD gauge is located on the Water Department and is a seasonal rain gauge. The USGS gauge is located near the Cambridge Water Department at Fresh Pond.

Both year round rain gauges had technical issues throughout the year. The USGS meter did not record several storms that significantly reduced the amount of rainfall for the year in Cambridge. The rain gauge on the DPW roof had technical issues throughout the year and did not record multiple events and was inaccurate for several others.

Due to these technical issues the three closest rain gauges are being used to run the City's Combined Sewer Model. These rain gauges are USGS gauges and located at the Muddy River in Brookline, Stony Creek in Waltham and Hobbs Creek in Waltham. Below are the yearly rainfall totals for each of the gauges plus the seasonal DPW rain gauge.

## MAP 2.1 RAIN GAUGE LOCATIONS



**Table 2.4 Yearly Rainfall Totals**

Location	Yearly Rainfall
Muddy River	44.86
Stony Brook	45.34
Hobbs Brook	48.21
Cambridge DPW	36.61*

\*Partial year total-April 1 to December 9

### **Alewife Brook**

The total amount of activations for the Alewife Brook was forty-one (41) activations with 134.64 million gallons of combined sewer for the 2014 rainfall. Under the typical year rainfall there are forty (40) activations that produced 19.09 million gallons of combined sewer.

The overall hydraulic conditions for the Alewife Brook catchment area will change over the next several years with the separation of CAM 004 and other upstream and downstream separation, and mitigation efforts by the surrounding towns and the MWRA. The CSO flow into the MWRA system will be reduced and storm water flow into the Alewife Brook will be cleaner than it is today.

### **CAM 001**

The 2014 rainfall produced six (6) total activations with a volume of 0.02 MG. According to the Infoworks modeling software, the typical year rainfall on the 2014 system produced a total of one activation that had a volume of 0.003 MG.

### **CAM 002**

The 2014 rainfall produced nine (11) overflows that had a total volume of 5.93 MG. The typical year rainfall on the 2014 system produced 8 activations that had a total volume of 1.75 MG.

CAM 002 currently has one (1) outfall open. The LTCP has both CAM 002A and CAM 002B overflows open. The LTCP plan also has an overflow to the 60-inch MWRA pipe located in the Alewife Brook Parkway open, which is currently closed. The closure allows for more flow to enter the regulator structure and creates more activations at CAM 002A. The regulating structure has an 18-inch outlet leading the 29"x 33" MWRA relief pipe that conveys the combined sewer flow. Due to this added flow, the total volume entering the structure is greater than the 18-inch outlet can handle during larger rain events and overflows to the Alewife Brook occur. Once the overflow to the Alewife Brook Sewer is open, it will allow for more combined sewer to enter into the MWRA system and reduce overflow activations into the Alewife Brook.

### **CAM 004**

The LTCP has CAM 004 closed. The work for this outfall has begun and a more detailed description of the work has been documented in section 3.0 Status of CSO Abatement Projects.

When reviewing the data for 2014 combined sewer overflows CAM 004 had nine (9) overflows for a total of 84.84 MG. The typical year had a volume of 9.34 million gallons with 9 activations.

**CAM 401A**

The 2014 rainfall produced four (4) activation that had a total release volume of 21.88 MG. The typical year rainfall on the 2014 CAM 401A system had a total of 11 overflows with a volume of 4.72 MG. CAM 401A is influenced greatly by the peak intensity of a storm. CAM 401A is also influenced by downstream conditions that will be changing once CAM 004 is separated. The hydraulic conditions today do not accurately reflect the LTCP conditions.

**CAM 401B**

The 2014 rainfall produced ten (10) activations that had a total volume of 21.98MG. The typical year rainfall on the 2014 system had a total volume of 2.35 MG through 10 releases.

CAM 401B currently has a 10-inch orifice plate on the relief pipe to the MWRA system. This orifice is attached to an 18-inch pipe. The LTCP has this orifice being removed, which will allow more flow into the 18-inch pipe and in turn reduces the amount of CSO activation in the LTCP.

**Charles River**

For the CSO's that are located on the Charles River the 2014 rainfall produced a total of four (6) releases. Each of the CSO locations had two (2) releases with a total CSO flow of 6.67 MG. The LTCP allows for seven (7) releases with a total volume of 1.33 MG.

**CAM 005**

The 2014 rainfall produced two (2) activations with a volume of 0.97 MG. The typical year rainfall produced 4 activations for a total of 1.60 MG

**CAM 007**

The 2014 rainfall produce two (2) activations with a total volume of 0.23 MG. The typical year rainfall on the 2014 system had 3 releases for 0.68 MG.

CAM 007, like many of the City's CSO regulating structures, will overflow from a storm with a high hourly peak. The volumes of overflow will also increase when this peak coincides with a storm that has a large volume of rainfall.

**CAM 009 and CAM 011**

Currently CAM 009 and CAM 011 are temporarily plugged. The LTCP has both of these outfalls open. The City of Cambridge plans to keep these outfalls closed until a more comprehensive study can be completed in this area on the effects of climate change and upstream conditions. This report assumes that these outfalls shall remain closed beyond the LTCP closing date.

## **CAM 017**

The Typical year rainfall on the CAM 017 system producing one (1) activation with an overflow of 0.34 MG. The typical year rainfall and the 2014 rainfall produced two (2) activations for 5.50 MG.

It is important to note that CAM 017 regulator structure has undergone a major construction project that reconfigured the weir structure. Previously the overflows at CAM 017 were regulated by a 10-ft wide static weir at an elevation of 14.39-ft. There are three bending weirs installed in different chambers. Two bending weirs are set at an elevation of 15.19-ft and are 7.5-ft wide and the other bending weir is set at 15.08-ft and is 9.5-ft wide. The new weirs will have a variable release elevation based on the hydraulic conditions in the system. The bending weirs have been set so they crest at an elevation of 14.94-ft. The implementation of the bending weirs has lowered the overall hydraulic grade line in the sewer system during large storm events and reduced flooding upstream from the bending weirs.

## **3.0 Status of CSO Abatement Projects`**

### ***3.1 Project Updates***

The City of Cambridge continues to implement abatement projects in accordance with the Massachusetts Water Resources Authority (MWRA) Final CSO Facilities Plan, the Federal Court Order (US v. MDC., et al., No. 85-0489 (D. Mass)), as amended by the Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflow Control. The information provided in this Annual Report conforms to information and data submitted to the MWRA for inclusion in their court-ordered annual report on CSO abatement project progress.

As described in more detail in the MWRA 2014 CSO Annual Progress Report (available at <http://www.mwra.com/cso/csoannualreports.htm>), the CSO Control Plan for Alewife Brook includes four (4) project components for which the City of Cambridge is responsible, including:

- CAM004 Stormwater Outfall and Wetland Basin (Contract 12)
- CAM004 Sewer Separation (Contracts 8A, 8B, and 9)
- CAM400 Common Manhole Separation (Contract 13)
- Interceptor Connection Relief and Floatables Control (Contract 4)

### **Contracts 8A, 8B and 9**

Cambridge has continued to make progress with the three construction contracts (Cambridge contracts 8A, 8B and 9) that comprise the remaining work of the CAM004 sewer separation project. Cambridge continues to manage, coordinate and sequence the work of all three contracts and related utility relocations and traffic management to control construction impacts and bring the project to completion by December 2015 in compliance with Schedule Seven.



The \$17.8 million Contract 8A includes the separation of combined sewers in a 68-acre area immediately east of Fresh Pond Parkway, from Fresh Pond to Brattle Street. The sewer separation work of Contract 8A is substantially complete. Cambridge now expects the contract's ongoing surface restoration work and environmental improvements, including porous pavements, stormwater bio-basins, and trees and other plantings, will continue through June 2015.

The \$31.2 million Contract 8B, includes the separation of combined sewers in Huron Avenue and several intersecting streets to separate combined sewers in an 83-acre area east of the Contract 8A work area, extending as far east and north as Concord Avenue and as far south as Brattle Street. Contract 8B commenced in September 2013 and is approximately 40 percent complete.

Cambridge's contractor completed sewer and drain work on Lincoln Lane and drain work on Dunstable Road. The contractor's ongoing work includes the installation of storm drains and sewers on Appleton Street, Blakeslee Street, Fayerweather Street, Huron Avenue, and Vassal Lane. The contractor has also made progress with the installation of storm drain lateral (property services) on Fayerweather Street, Huron Avenue and Royal Avenue, as well as water main work on Fayerweather and Vassal Lane.

NStar Gas has completed the necessary gas line relocations in the Contract 8B area. However, delays with the NStar Gas relocations, which were extensive and were affected by severe winter conditions this past season, compromised the contractor's original schedule and led to the need for a recovery schedule.

The contractor's recovery schedule has been approved by Cambridge and implemented by the contractor. Cambridge issued construction change order #2 to Contract 8B in September to effect the recovery schedule, which re-sequences the remaining work to allow the contractor to complete Contract 8B's "Milestone 1" work (CSO related work, primarily sewer and drain installations) by the original contract milestone of September 20, 2015, and extends the contract term by 103 days, shifting Milestone 2 (non-CSO work, primarily surface restoration) from September 2016 to December 2016. The CSO related work of Contract 8B must be complete by September 2015 to allow a 3-month window for the Contract 9 contractor to complete subsequent, related sewer and storm drain work by December 2015 in compliance with Schedule Seven. Since September, the contractor for Contract 8B has been meeting the recovery schedule.

The \$24.4 million Contract 9, involves the separation of combined sewers in a 60-acre area north of Contracts 8A and 8B and extending from Fresh Pond Parkway in the west to the intersection of Concord Avenue and Huron Avenue in the east. Contract 9 commenced in February of this year and is 30 percent complete.

The contractor completed sewer and drain installations on Concord Avenue and Fayerweather Street and water line installation on Corporal Burns Street, and continued with sewer and drain installations on Copley Street and Walden Street. The contractor also is constructing new catch basins on Copley Street, Fayerweather Street and Walden Street. NStar Gas has been relocating gas mains ahead of sewer and drain work, with relocations remaining to be done only on Garden Street. Cambridge expects Contract 9 to be substantially complete by December 2015, in compliance with Schedule Seven, assuming continuing effective implementation of the Contract 8B recovery schedule. Cambridge expects to continue the surface restoration work of Contract 9 through August 2016.



a. Concord Lane.

As previously reported, Cambridge was unable to include in Contract 9 the originally planned contract work along Concord Lane, a short private way serving commercial properties, because Cambridge had been unable to secure right of entry (ROE) onto the property for design investigations. Since securing ROE#1, for site surveys, and ROE#2, for soil borings and installation of groundwater observation wells, by last summer, Cambridge was able to complete final design of the sewer separation on Concord Lane and advertised the construction contract for bids on December 10<sup>th</sup>. The bid opening is scheduled for January 15, 2014, and the third and final ROE, for construction activities on Concord Lane, is scheduled to be executed by the property owner, the City and the contractor, once the contract is awarded. Cambridge expects to complete the Concord Lane construction and all other CAM004 sewer separation construction by the December 2015 milestone in Schedule Seven.

For a copy of plans visit:

Concord Ave.:

<http://www.cambridgema.gov/theworks/cityprojects/detail.aspx?path=%2fsitecore%2fcontent%2fhome%2ftheworks%2fcityprojects%2f2013%2falewifese sewerseparationconcordavenueneighborhood>

Huron 8A:

<http://www.cambridgema.gov/theworks/cityprojects/detail.aspx?path=%2fsitecore%2fcontent%2fhome%2ftheworks%2fcityprojects%2f2010%2falewifese sewerseparationproject>

Huron 8B:

<http://www.cambridgema.gov/theworks/cityprojects/detail.aspx?path=%2fsitecore%2fcontent%2fhome%2ftheworks%2fcityprojects%2f2012%2falewifese sewerseparationprojecthuronb>

### 3.2 Project Schedule

Design and construction milestones for the Alewife Brook projects were added to Schedule Seven (7) in 2006 when EPA and DEP approved the regional long-term CSO control plan. However, the wetland appeals process continued through 2007 and into 2008. As a result of the delays associated with the wetlands appeals, the City has developed new project schedules and time estimates to complete major design, permitting and construction tasks.

Project	Benefit	Implementation Status	Scheduled Completion
<b>Contract 4:</b> Interceptor Connection Relief and Floatables Control	Upgrades connections between Cambridge and MWRA systems to provide greater capacity; provides floatables control.	Project completed in October 2010.	2010
<b>Contract 13:</b> CAM400 Manhole Separation	Removes stormwater from the sewer system; eliminate CSO at Outfall CAM400.	Project completed in March 2012.	2012
<b>Contract 12:</b> CAM004 Stormwater Outfall and Wetland Basin	Conveys separated stormwater flows to wetland system for treatment and flow attenuation.	Commence construction in Spring 2012.	2014
<b>Contracts 8A, 8B and 9:</b> CAM004 Sewer Separation	Removes stormwater from the sewer system; eliminate CSO at Outfall CAM004.	Early work along Fresh Pond Parkway was completed in 2000-02. Sewer Separation construction has begun in Contract 8A and Contract 8B. Contract 9 is estimated to start in March 2014	2015

**Table 3.1 – City of Cambridge CSO Abatement Projects and Status, December 2014**

CSO Outfall	Required Project Type Under 2 <sup>nd</sup> Stipulation	Receiving Water	Contract / Project Name	Completion Date or Proposed Completion Date	Notes
CAM001	Floatables Control	Alewife	Contract 4 - Floatables	October 2010	Baffles installed.
CAM002	Floatables control; interceptor relief	Alewife	Contract 4 - Floatables	October 2010	Baffles installed 2010 and blocked underflow.
CAM004	Sewer Separation	Alewife	2A/2B Fresh Pond Parkway	2001	CSO is now controlled by Drain Vault 5
CAM004	Sewer Separation	Alewife	Contract 8A/8B/9	December 2015	At completion, CSO at CAM004 will be eliminated; removal of blocked underflow in CAM002 and orifice plate in CAM401B
CAM004	Sewer Separation	Alewife	Contract 12- Stormwater Outfall	April 2013	Stormwater outfall and treatment wetland
CAM400	Sewer Separation / common manholes	Alewife	Contract 13	March 2011	CSO regulator eliminated; convert to stormwater outfall.
CAM401A	Floatables Control	Alewife	Bellis Circle	2005	Installed brush screen
CAM401B	Floatables control; interceptor relief	Alewife	Contract 4- Floatables	October 2010	Baffles installed in 2010 and underflow throttled.
CAM005	Hydraulic Relief	Charles	MWRA CAM005 Hydraulic Relief	2000	For full project description see: <a href="http://www.mwra.com/annual/csoar/2009/csoar2009.pdf">http://www.mwra.com/annual/csoar/2009/csoar2009.pdf</a>
CAM007	Floatables Control	Charles	Contract 5	2009	Baffle installed
CAM009	Floatables Control	Charles	Contract 5	2009	Outfall temporarily plugged
CAM011	Floatables Control	Charles	Contract 5	2009	Outfall temporarily plugged
CAM017	Floatables Control	Charles	Contract 5	2009	Baffles were installed in 2009.
CAM017	Hydraulic Relief	Charles	CAM 017 Hydraulic Relief	2013	Bending weirs and baffles installed in 2014

## **4.0 Modifications to Nine Minimum Controls Plan**

The Nine Minimum Controls Plan (NMCP) was updated in its entirety and submitted together with the first annual report (April 2009). The plan provides a summary of the evaluations undertaken to address each control measure since the original plan was developed in 1997. Enhancements were made to the NMCP to meet the minimum implementation levels stipulated in the permit.

# **APPENDIX I**

## **CAMBRIDGE DPW RAIN GAUGE**

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

<b>Date</b>	<b>Daily Rainfall (in.)</b>	<b>Maximum Intensity (in./hr)</b>	<b>Average Intensity (in./hr)</b>
4/1/2014	0.00	0.00	0.00
4/2/2014	0.00	0.00	0.00
4/3/2014	0.00	0.00	0.00
4/4/2014	0.22	0.09	0.02
4/5/2014	0.27	0.15	0.02
4/6/2014	0.00	0.00	0.00
4/7/2014	0.02	0.02	0.01
4/8/2014	0.61	0.19	0.03
4/9/2014	0.00	0.00	0.00
4/10/2014	0.00	0.00	0.00
4/11/2014	0.00	0.00	0.00
4/12/2014	0.04	0.03	0.01
4/13/2014	0.03	0.03	0.01
4/14/2014	0.00	0.00	0.00
4/15/2014	1.09	0.27	0.03
4/16/2014	0.52	0.12	0.02
4/17/2014	0.00	0.00	0.00
4/18/2014	0.00	0.00	0.00
4/19/2014	0.00	0.00	0.00
4/20/2014	0.00	0.00	0.00
4/21/2014	0.00	0.00	0.00
4/22/2014	0.05	0.05	0.03
4/23/2014	0.26	0.11	0.03
4/24/2014	0.00	0.00	0.00
4/25/2014	0.00	0.00	0.00
4/26/2014	0.00	0.00	0.00
4/27/2014	0.00	0.00	0.00
4/28/2014	0.00	0.00	0.00
4/29/2014	0.00	0.00	0.00
4/30/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>3.11</b>		

Notes:

Rainfall was measured in Twenty minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

<b>Date</b>	<b>Daily Rainfall (in.)</b>	<b>Maximum Intensity (in./hr)</b>	<b>Average Intensity (in./hr)</b>
5/1/2014	0.00	0.00	0.00
5/2/2014	0.00	0.00	0.00
5/3/2014	0.00	0.00	0.00
5/4/2014	0.00	0.00	0.00
5/5/2014	0.00	0.00	0.00
5/6/2014	0.00	0.00	0.00
5/7/2014	0.00	0.00	0.00
5/8/2014	0.00	0.00	0.00
5/9/2014	0.00	0.00	0.00
5/10/2014	0.48	0.36	0.07
5/11/2014	0.01	0.01	0.01
5/12/2014	0.00	0.00	0.00
5/13/2014	0.00	0.00	0.00
5/14/2014	0.01	0.01	0.01
5/15/2014	0.00	0.00	0.00
5/16/2014	0.15	0.12	0.03
5/17/2014	0.90	0.53	0.08
5/18/2014	0.00	0.00	0.00
5/19/2014	0.07	0.04	0.01
5/20/2014	0.00	0.00	0.00
5/21/2014	0.00	0.00	0.00
5/22/2014	0.14	0.11	0.02
5/23/2014	0.01	0.01	0.01
5/24/2014	0.09	0.07	0.02
5/25/2014	0.00	0.00	0.00
5/26/2014	0.00	0.00	0.00
5/27/2014	0.34	0.21	0.03
5/28/2014	0.12	0.05	0.01
5/29/2014	0.00	0.00	0.00
5/30/2014	0.11	0.05	0.02
5/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>2.43</b>		

Notes:

Rainfall was measured in Twenty minute intervals  
 Bolded Data denotes CSO discharge.



# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
6/1/2014	0.00	0.00	0.00
6/2/2014	0.00	0.00	0.00
6/3/2014	0.00	0.00	0.00
6/4/2014	0.13	0.07	0.02
6/5/2014	0.70	0.17	0.03
6/6/2014	0.00	0.00	0.00
6/7/2014	0.00	0.00	0.00
6/8/2014	0.00	0.00	0.00
6/9/2014	0.00	0.00	0.00
6/10/2014	0.47	0.47	0.47
6/11/2014	0.00	0.00	0.00
6/12/2014	0.00	0.00	0.00
6/13/2014	0.60	0.26	0.03
6/14/2014	0.01	0.01	0.01
6/15/2014	0.00	0.00	0.00
6/16/2014	0.00	0.00	0.00
6/17/2014	0.00	0.00	0.00
6/18/2014	0.00	0.00	0.00
6/19/2014	0.00	0.00	0.00
6/20/2014	0.00	0.00	0.00
6/21/2014	0.00	0.00	0.00
6/22/2014	0.00	0.00	0.00
6/23/2014	0.00	0.00	0.00
6/24/2014	0.00	0.00	0.00
6/25/2014	0.00	0.00	0.00
<b>6/26/2014</b>	<b>0.71</b>	<b>0.58</b>	<b>0.06</b>
6/27/2014	0.00	0.00	0.00
6/28/2014	0.00	0.00	0.00
6/29/2014	0.00	0.00	0.00
6/30/2014	0.00	0.00	0.00
TOTAL	2.62		

Notes:

Rainfall was measured in Twenty minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
7/1/2014	0.00	0.00	0.00
7/2/2014	0.00	0.00	0.00
<b>7/3/2014</b>	<b>0.28</b>	<b>0.28</b>	<b>0.28</b>
<b>7/4/2014</b>	<b>2.00</b>	<b>0.37</b>	<b>0.06</b>
<b>7/5/2014</b>	<b>0.43</b>	<b>0.11</b>	<b>0.03</b>
7/6/2014	0.00	0.00	0.00
<b>7/7/2014</b>	<b>0.16</b>	<b>0.16</b>	<b>0.16</b>
7/8/2014	0.00	0.00	0.00
7/9/2014	0.00	0.00	0.00
7/10/2014	0.00	0.00	0.00
7/11/2014	0.00	0.00	0.00
7/12/2014	0.00	0.00	0.00
7/13/2014	0.00	0.00	0.00
7/14/2014	0.27	0.21	0.04
7/15/2014	0.01	0.01	0.01
<b>7/16/2014</b>	<b>0.80</b>	<b>0.56</b>	<b>0.07</b>
7/17/2014	0.00	0.00	0.00
7/18/2014	0.00	0.00	0.00
7/19/2014	0.00	0.00	0.00
7/20/2014	0.00	0.00	0.00
7/21/2014	0.00	0.00	0.00
7/22/2014	0.00	0.00	0.00
7/23/2014	0.00	0.00	0.00
7/24/2014	0.00	0.00	0.00
7/25/2014	0.00	0.00	0.00
7/26/2014	0.00	0.00	0.00
7/27/2014	0.34	0.22	0.04
<b>7/28/2014</b>	<b>1.49</b>	<b>1.48</b>	<b>0.37</b>
7/29/2014	0.00	0.00	0.00
7/30/2014	0.00	0.00	0.00
7/31/2014	0.00	0.00	0.00
TOTAL	6.28		

Notes:

Rainfall was measured in Twenty minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
8/1/2014	0.50	0.20	0.15
8/2/2014	0.00	0.00	0.00
8/3/2014	0.00	0.00	0.00
8/4/2014	0.00	0.00	0.00
8/5/2014	0.00	0.00	0.00
8/6/2014	0.00	0.00	0.00
8/7/2014	0.07	0.07	0.07
8/8/2014	0.00	0.00	0.00
8/9/2014	0.00	0.00	0.00
8/10/2014	0.00	0.00	0.00
8/11/2014	0.00	0.00	0.00
8/12/2014	0.00	0.00	0.00
<b>8/13/2014</b>	<b>1.64</b>	<b>0.46</b>	<b>0.04</b>
8/14/2014	0.00	0.00	0.00
8/15/2014	0.01	0.01	0.01
8/16/2014	0.00	0.00	0.00
8/17/2014	0.00	0.00	0.00
8/18/2014	0.00	0.00	0.00
8/19/2014	0.00	0.00	0.00
8/20/2014	0.00	0.00	0.00
8/21/2014	0.00	0.00	0.00
8/22/2014	0.11	0.08	0.02
8/23/2014	0.00	0.00	0.00
8/24/2014	0.00	0.00	0.00
8/25/2014	0.00	0.00	0.00
8/26/2014	0.00	0.00	0.00
8/27/2014	0.07	0.05	0.01
8/28/2014	0.00	0.00	0.00
8/29/2014	0.00	0.00	0.00
8/30/2014	0.00	0.00	0.00
<b>8/31/2014</b>	<b>0.47</b>	<b>0.40</b>	<b>0.07</b>
TOTAL	2.87		

Notes:

Rainfall was measured in Twenty minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
9/1/2014	0.00	0.00	0.00
<b>9/2/2014</b>	<b>0.40</b>	<b>0.37</b>	<b>0.13</b>
9/3/2014	0.00	0.00	0.00
9/4/2014	0.00	0.00	0.00
9/5/2014	0.00	0.00	0.00
<b>9/6/2014</b>	<b>0.16</b>	<b>0.16</b>	<b>0.08</b>
9/7/2014	0.11	0.09	0.03
9/8/2014	0.00	0.00	0.00
9/9/2014	0.00	0.00	0.00
9/10/2014	0.00	0.00	0.00
9/11/2014	0.00	0.00	0.00
9/12/2014	0.00	0.00	0.00
9/13/2014	0.15	0.10	0.03
9/14/2014	0.00	0.00	0.00
9/15/2014	0.00	0.00	0.00
9/16/2014	0.00	0.00	0.00
9/17/2014	0.00	0.00	0.00
9/18/2014	0.00	0.00	0.00
9/19/2014	0.00	0.00	0.00
9/20/2014	0.00	0.00	0.00
9/21/2014	0.04	0.04	0.04
9/22/2014	0.01	0.01	0.01
9/23/2014	0.00	0.00	0.00
9/24/2014	0.00	0.00	0.00
9/25/2014	0.00	0.00	0.00
9/26/2014	0.00	0.00	0.00
9/27/2014	0.00	0.00	0.00
9/28/2014	0.00	0.00	0.00
9/29/2014	0.00	0.00	0.00
9/30/2014	0.13	0.04	0.01
<b>TOTAL</b>	<b>1.00</b>		

Notes:

Rainfall was measured in Twenty minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
10/1/2014	0.94	0.26	0.03
10/2/2014	0.30	0.15	0.02
10/3/2014	0.01	0.01	0.01
10/4/2014	0.21	0.08	0.02
10/5/2014	0.00	0.00	0.00
10/6/2014	0.00	0.00	0.00
10/7/2014	0.00	0.00	0.00
10/8/2014	0.00	0.00	0.00
10/9/2014	0.00	0.00	0.00
10/10/2014	0.00	0.00	0.00
10/11/2014	0.33	0.11	0.02
10/12/2014	0.01	0.01	0.01
10/13/2014	0.00	0.00	0.00
10/14/2014	0.00	0.00	0.00
10/15/2014	0.00	0.00	0.00
10/16/2014	0.54	0.12	0.03
10/17/2014	0.00	0.00	0.00
10/18/2014	0.00	0.00	0.00
10/19/2014	0.00	0.00	0.00
10/20/2014	0.00	0.00	0.00
10/21/2014	0.02	0.02	0.02
10/22/2014	0.69	0.23	0.03
<b>10/23/2014</b>	<b>2.57</b>	<b>0.50</b>	<b>0.07</b>
10/24/2014	0.15	0.13	0.03
10/25/2014	0.00	0.00	0.00
10/26/2014	0.00	0.00	0.00
10/27/2014	0.00	0.00	0.00
10/28/2014	0.00	0.00	0.00
10/29/2014	0.05	0.03	0.01
10/30/2014	0.00	0.00	0.00
10/31/2014	0.00	0.00	0.00
TOTAL	5.43		

Notes:

Rainfall was measured in Twenty minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
11/1/2014	0.55	0.10	0.02
11/2/2014	0.33	0.11	0.02
11/3/2014	0.00	0.00	0.00
11/4/2014	0.00	0.00	0.00
11/5/2014	0.00	0.00	0.00
11/6/2014	0.64	0.14	0.02
11/7/2014	0.01	0.01	0.01
11/8/2014	0.00	0.00	0.00
11/9/2014	0.00	0.00	0.00
11/10/2014	0.00	0.00	0.00
11/11/2014	0.00	0.00	0.00
11/12/2014	0.00	0.00	0.00
11/13/2014	0.10	0.06	0.02
11/14/2014	0.27	0.07	0.02
11/15/2014	0.00	0.00	0.00
11/16/2014	0.00	0.00	0.00
<b>11/17/2014</b>	<b>1.68</b>	<b>0.34</b>	<b>0.04</b>
11/18/2014	0.00	0.00	0.00
11/19/2014	0.00	0.00	0.00
11/20/2014	0.00	0.00	0.00
11/21/2014	0.00	0.00	0.00
11/22/2014	0.00	0.00	0.00
11/23/2014	0.00	0.00	0.00
11/24/2014	0.35	0.12	0.02
11/25/2014	0.00	0.00	0.00
11/26/2014	1.69	0.28	0.04
11/27/2014	0.16	0.04	0.01
11/28/2014	0.01	0.01	0.01
11/29/2014	0.00	0.00	0.00
11/30/2014	0.01	0.01	0.01
TOTAL	5.80		

Notes:

Rainfall was measured in Twenty minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

CITY OF CAMBRIDGE UNHEATED METER, CAMBRIDGE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
12/1/2014	0.00	0.00	0.00
12/2/2014	0.18	0.07	0.02
12/3/2014	0.54	0.16	0.03
12/4/2014	0.00	0.00	0.00
12/5/2014	0.17	0.09	0.02
12/6/2014	1.16	0.16	0.02
12/7/2014	0.06	0.04	0.01
12/8/2014	0.00	0.00	0.00
<b>12/9/2014</b>	<b>4.62</b>	<b>0.79</b>	<b>0.08</b>
<b>12/10/2014</b>	<b>0.03</b>	<b>0.01</b>	<b>0.01</b>
TOTAL	6.76		

Notes:

Rainfall was measured in Twenty minute intervals

Bolded Data denotes CSO discharge.

## **HOBBS BROOK RAIN GAUGE**



CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
1/1/2014	0.00	0.00	0.00
1/2/2014	0.24	0.04	0.01
1/3/2014	0.23	0.08	0.01
1/4/2014	0.10	0.16	0.02
1/5/2014	0.06	0.04	0.01
1/6/2014	0.31	0.08	0.01
1/7/2014	0.00	0.00	0.00
1/8/2014	0.00	0.00	0.00
1/9/2014	0.00	0.00	0.00
1/10/2014	0.00	0.00	0.00
1/11/2014	0.51	0.36	0.02
1/12/2014	0.06	0.12	0.02
1/13/2014	0.00	0.00	0.00
1/14/2014	0.63	0.12	0.02
1/15/2014	0.00	0.00	0.00
1/16/2014	0.00	0.00	0.00
1/17/2014	0.00	0.00	0.00
1/18/2014	0.58	0.20	0.03
1/19/2014	0.03	0.04	0.01
1/20/2014	0.00	0.00	0.00
1/21/2014	0.06	0.04	0.01
1/22/2014	0.02	0.04	0.01
1/23/2014	0.00	0.00	0.00
1/24/2014	0.00	0.00	0.00
1/25/2014	0.00	0.00	0.00
1/26/2014	0.00	0.00	0.00
1/27/2014	0.04	0.04	0.01
1/28/2014	0.00	0.00	0.00
1/29/2014	0.00	0.00	0.00
1/30/2014	0.00	0.00	0.00
1/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>2.87</b>		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
2/1/2014	0.00	0.00	0.00
2/2/2014	0.03	0.04	0.01
2/3/2014	0.16	0.08	0.01
2/4/2014	0.00	0.00	0.00
2/5/2014	1.18	0.24	0.02
2/6/2014	0.00	0.00	0.00
2/7/2014	0.00	0.00	0.00
2/8/2014	0.00	0.00	0.00
2/9/2014	0.03	0.04	0.01
2/10/2014	0.00	0.04	0.00
2/11/2014	0.00	0.00	0.00
2/12/2014	0.00	0.00	0.00
2/13/2014	1.23	0.48	0.03
2/14/2014	0.39	0.32	0.03
2/15/2014	0.32	0.08	0.01
2/16/2014	0.02	0.04	0.01
2/17/2014	0.00	0.00	0.00
2/18/2014	0.47	0.20	0.02
2/19/2014	0.18	0.20	0.02
2/20/2014	0.09	0.08	0.01
2/21/2014	0.26	0.28	0.02
2/22/2014	0.00	0.00	0.00
2/23/2014	0.00	0.00	0.00
2/24/2014	0.00	0.00	0.00
2/25/2014	0.00	0.00	0.00
2/26/2014	0.00	0.00	0.00
2/27/2014	0.00	0.00	0.00
2/28/2014	0.00	0.00	0.00
<b>TOTAL</b>	4.36		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
3/1/2014	0.00	0.00	0.00
3/2/2014	0.00	0.00	0.00
3/3/2014	0.00	0.00	0.00
3/4/2014	0.00	0.00	0.00
3/5/2014	0.00	0.00	0.00
3/6/2014	0.00	0.00	0.00
3/7/2014	0.00	0.00	0.00
3/8/2014	0.00	0.00	0.00
3/9/2014	0.00	0.00	0.00
3/10/2014	0.00	0.00	0.00
3/11/2014	0.00	0.00	0.00
3/12/2014	0.44	0.16	0.02
3/13/2014	0.13	0.08	0.01
3/14/2014	0.00	0.00	0.00
3/15/2014	0.01	0.04	0.01
3/16/2014	0.00	0.00	0.00
3/17/2014	0.00	0.00	0.00
3/18/2014	0.00	0.00	0.00
3/19/2014	0.00	0.00	0.00
3/20/2014	0.36	0.16	0.02
3/21/2014	0.00	0.00	0.00
3/22/2014	0.01	0.04	0.01
3/23/2014	0.00	0.00	0.00
3/24/2014	0.00	0.00	0.00
3/25/2014	0.00	0.00	0.00
3/26/2014	0.00	0.00	0.00
3/27/2014	0.00	0.00	0.00
3/28/2014	0.04	0.04	0.01
3/29/2014	0.73	0.20	0.02
<b>3/30/2014</b>	<b>2.24</b>	<b>0.40</b>	<b>0.04</b>
<b>3/31/2014</b>	<b>0.66</b>	<b>0.24</b>	<b>0.02</b>
TOTAL	4.62		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
4/1/2014	0.00	0.00	0.00
4/2/2014	0.00	0.00	0.00
4/3/2014	0.00	0.00	0.00
4/4/2014	0.15	0.12	0.02
4/5/2014	0.28	0.44	0.02
4/6/2014	0.00	0.00	0.00
4/7/2014	0.01	0.04	0.01
4/8/2014	0.48	0.32	0.02
4/9/2014	0.00	0.00	0.00
4/10/2014	0.00	0.00	0.00
4/11/2014	0.00	0.00	0.00
4/12/2014	0.09	0.08	0.01
4/13/2014	0.05	0.08	0.01
4/14/2014	0.00	0.00	0.00
4/15/2014	0.84	0.36	0.02
4/16/2014	0.53	0.20	0.02
4/17/2014	0.00	0.00	0.00
4/18/2014	0.00	0.00	0.00
4/19/2014	0.00	0.00	0.00
4/20/2014	0.00	0.00	0.00
4/21/2014	0.00	0.00	0.00
4/22/2014	0.06	0.08	0.02
4/23/2014	0.54	0.28	0.03
4/24/2014	0.00	0.00	0.00
4/25/2014	0.00	0.00	0.00
4/26/2014	0.28	0.12	0.01
4/27/2014	0.19	0.12	0.02
4/28/2014	0.00	0.00	0.00
4/29/2014	0.01	0.04	0.01
4/30/2014	0.42	0.16	0.02
TOTAL	4.63		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
5/1/2014	0.70	0.36	0.02
5/2/2014	0.01	0.04	0.01
5/3/2014	0.00	0.00	0.00
5/4/2014	0.00	0.00	0.00
5/5/2014	0.00	0.00	0.00
5/6/2014	0.00	0.00	0.00
5/7/2014	0.00	0.00	0.00
5/8/2014	0.00	0.00	0.00
5/9/2014	0.01	0.04	0.01
5/10/2014	0.84	2.36	0.08
5/11/2014	0.00	0.00	0.00
5/12/2014	0.00	0.00	0.00
5/13/2014	0.00	0.00	0.00
5/14/2014	0.00	0.00	0.00
5/15/2014	0.00	0.00	0.00
5/16/2014	0.28	0.40	0.02
5/17/2014	0.66	0.80	0.04
5/18/2014	0.00	0.00	0.00
5/19/2014	0.05	0.04	0.01
5/20/2014	0.00	0.00	0.00
5/21/2014	0.00	0.00	0.00
5/22/2014	0.13	0.16	0.03
5/23/2014	0.03	0.04	0.01
5/24/2014	0.06	0.08	0.01
5/25/2014	0.00	0.00	0.00
5/26/2014	0.05	0.12	0.02
5/27/2014	0.23	0.12	0.02
5/28/2014	0.15	0.24	0.02
5/29/2014	0.00	0.00	0.00
5/30/2014	0.05	0.16	0.03
5/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>2.55</b>		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
6/1/2014	0.00	0.00	0.00
6/2/2014	0.00	0.00	0.00
6/3/2014	0.00	0.00	0.00
6/4/2014	0.30	0.32	0.03
6/5/2014	0.48	0.16	0.02
6/6/2014	0.00	0.00	0.00
6/7/2014	0.00	0.00	0.00
6/8/2014	0.00	0.00	0.00
6/9/2014	0.00	0.00	0.00
6/10/2014	0.00	0.00	0.00
6/11/2014	0.00	0.00	0.00
6/12/2014	0.00	0.00	0.00
6/13/2014	0.65	0.24	0.03
6/14/2014	0.01	0.04	0.01
6/15/2014	0.00	0.00	0.00
6/16/2014	0.00	0.00	0.00
6/17/2014	0.11	0.20	0.02
6/18/2014	0.04	0.08	0.01
6/19/2014	0.00	0.00	0.00
6/20/2014	0.00	0.00	0.00
6/21/2014	0.00	0.00	0.00
6/22/2014	0.00	0.00	0.00
6/23/2014	0.00	0.00	0.00
6/24/2014	0.00	0.00	0.00
6/25/2014	0.00	0.00	0.00
<b>6/26/2014</b>	<b>0.90</b>	<b>0.92</b>	<b>0.06</b>
6/27/2014	0.00	0.00	0.00
6/28/2014	0.00	0.00	0.00
6/29/2014	0.00	0.00	0.00
6/30/2014	0.00	0.00	0.00
TOTAL	2.49		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
7/1/2014	0.00	0.00	0.00
7/2/2014	0.00	0.00	0.00
<b>7/3/2014</b>	<b>0.58</b>	<b>1.92</b>	<b>0.19</b>
<b>7/4/2014</b>	<b>1.36</b>	<b>0.40</b>	<b>0.03</b>
<b>7/5/2014</b>	<b>0.27</b>	<b>0.20</b>	<b>0.02</b>
7/6/2014	0.00	0.00	0.00
<b>7/7/2014</b>	<b>0.62</b>	<b>2.08</b>	<b>0.10</b>
7/8/2014	0.01	0.04	0.01
7/9/2014	0.00	0.00	0.00
7/10/2014	0.00	0.00	0.00
7/11/2014	0.00	0.00	0.00
7/12/2014	0.00	0.00	0.00
7/13/2014	0.01	0.04	0.01
7/14/2014	0.23	0.16	0.02
7/15/2014	0.17	0.40	0.03
<b>7/16/2014</b>	<b>1.55</b>	<b>2.52</b>	<b>0.12</b>
7/17/2014	0.00	0.00	0.00
7/18/2014	0.00	0.00	0.00
7/19/2014	0.00	0.00	0.00
7/20/2014	0.00	0.00	0.00
7/21/2014	0.00	0.00	0.00
7/22/2014	0.00	0.00	0.00
7/23/2014	0.00	0.00	0.00
7/24/2014	0.01	0.04	0.01
7/25/2014	0.00	0.00	0.00
7/26/2014	0.00	0.00	0.00
7/27/2014	0.15	0.12	0.02
<b>7/28/2014</b>	<b>1.24</b>	<b>2.24</b>	<b>0.21</b>
7/29/2014	0.00	0.00	0.00
7/30/2014	0.00	0.00	0.00
7/31/2014	0.00	0.00	0.00
TOTAL	6.70		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
8/1/2014	0.50	0.52	0.04
8/2/2014	0.03	0.04	0.01
8/3/2014	0.00	0.00	0.00
8/4/2014	0.00	0.00	0.00
8/5/2014	0.00	0.00	0.00
8/6/2014	0.00	0.00	0.00
8/7/2014	0.08	0.12	0.02
8/8/2014	0.00	0.00	0.00
8/9/2014	0.00	0.00	0.00
8/10/2014	0.00	0.00	0.00
8/11/2014	0.00	0.00	0.00
8/12/2014	0.00	0.00	0.00
<b>8/13/2014</b>	<b>1.48</b>	<b>0.40</b>	<b>0.03</b>
8/14/2014	0.00	0.00	0.00
8/15/2014	0.01	0.04	0.01
8/16/2014	0.00	0.00	0.00
8/17/2014	0.00	0.00	0.00
8/18/2014	0.00	0.00	0.00
8/19/2014	0.00	0.00	0.00
8/20/2014	0.00	0.00	0.00
8/21/2014	0.00	0.00	0.00
8/22/2014	0.14	0.12	0.02
8/23/2014	0.00	0.00	0.00
8/24/2014	0.00	0.00	0.00
8/25/2014	0.00	0.00	0.00
8/26/2014	0.00	0.00	0.00
8/27/2014	0.29	0.28	0.03
8/28/2014	0.00	0.00	0.00
8/29/2014	0.00	0.00	0.00
8/30/2014	0.00	0.00	0.00
<b>8/31/2014</b>	<b>0.60</b>	<b>1.08</b>	<b>0.06</b>
TOTAL	2.63		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.



# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
9/1/2014	0.00	0.00	0.00
<b>9/2/2014</b>	<b>0.31</b>	<b>0.72</b>	<b>0.08</b>
9/3/2014	0.00	0.00	0.00
9/4/2014	0.00	0.00	0.00
9/5/2014	0.00	0.00	0.00
<b>9/6/2014</b>	<b>1.17</b>	<b>4.08</b>	<b>0.23</b>
9/7/2014	0.06	0.08	0.01
9/8/2014	0.00	0.00	0.00
9/9/2014	0.00	0.00	0.00
9/10/2014	0.00	0.00	0.00
9/11/2014	0.00	0.00	0.00
9/12/2014	0.00	0.00	0.00
9/13/2014	0.17	0.12	0.02
9/14/2014	0.00	0.00	0.00
9/15/2014	0.00	0.00	0.00
9/16/2014	0.01	0.04	0.01
9/17/2014	0.00	0.00	0.00
9/18/2014	0.00	0.00	0.00
9/19/2014	0.00	0.00	0.00
9/20/2014	0.00	0.00	0.00
9/21/2014	0.17	0.40	0.04
9/22/2014	0.01	0.04	0.01
9/23/2014	0.00	0.00	0.00
9/24/2014	0.00	0.00	0.00
9/25/2014	0.00	0.00	0.00
9/26/2014	0.00	0.00	0.00
9/27/2014	0.00	0.00	0.00
9/28/2014	0.00	0.00	0.00
9/29/2014	0.00	0.00	0.00
9/30/2014	0.06	0.04	0.01
TOTAL	2.53		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
10/1/2014	0.57	0.24	0.02
10/2/2014	0.36	0.16	0.02
10/3/2014	0.01	0.04	0.01
10/4/2014	0.14	0.20	0.02
10/5/2014	0.00	0.00	0.00
10/6/2014	0.00	0.00	0.00
10/7/2014	0.01	0.04	0.01
10/8/2014	0.06	0.12	0.02
10/9/2014	0.00	0.00	0.00
10/10/2014	0.00	0.00	0.00
10/11/2014	0.25	0.08	0.01
10/12/2014	0.00	0.00	0.00
10/13/2014	0.00	0.00	0.00
10/14/2014	0.00	0.00	0.00
10/15/2014	0.00	0.00	0.00
10/16/2014	0.47	0.32	0.03
10/17/2014	0.00	0.00	0.00
10/18/2014	0.22	0.40	0.04
10/19/2014	0.00	0.00	0.00
10/20/2014	0.00	0.00	0.00
10/21/2014	0.03	0.08	0.02
10/22/2014	0.55	0.24	0.02
<b>10/23/2014</b>	<b>2.12</b>	<b>0.92</b>	<b>0.04</b>
10/24/2014	0.08	0.08	0.01
10/25/2014	0.00	0.00	0.00
10/26/2014	0.00	0.00	0.00
10/27/2014	0.00	0.00	0.00
10/28/2014	0.00	0.00	0.00
10/29/2014	0.10	0.16	0.01
10/30/2014	0.00	0.00	0.00
10/31/2014	0.00	0.00	0.00
TOTAL	4.87		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
11/1/2014	0.47	0.16	0.02
11/2/2014	0.17	0.08	0.01
11/3/2014	0.00	0.00	0.00
11/4/2014	0.00	0.00	0.00
11/5/2014	0.00	0.00	0.00
11/6/2014	0.46	0.20	0.02
11/7/2014	0.02	0.04	0.01
11/8/2014	0.00	0.00	0.00
11/9/2014	0.00	0.00	0.00
11/10/2014	0.00	0.00	0.00
11/11/2014	0.00	0.00	0.00
11/12/2014	0.00	0.00	0.00
11/13/2014	0.07	0.08	0.01
11/14/2014	0.26	0.08	0.01
11/15/2014	0.00	0.00	0.00
11/16/2014	0.00	0.00	0.00
<b>11/17/2014</b>	<b>1.43</b>	<b>0.40</b>	<b>0.03</b>
11/18/2014	0.00	0.00	0.00
11/19/2014	0.00	0.00	0.00
11/20/2014	0.00	0.00	0.00
11/21/2014	0.00	0.00	0.00
11/22/2014	0.00	0.00	0.00
11/23/2014	0.00	0.00	0.00
11/24/2014	0.28	0.12	0.02
11/25/2014	0.00	0.00	0.00
11/26/2014	0.39	0.16	0.01
11/27/2014	0.25	0.04	0.01
11/28/2014	0.03	0.08	0.02
11/29/2014	0.01	0.04	0.01
11/30/2014	0.53	0.08	0.01
TOTAL	4.26		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT HOBBS BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
12/1/2014	0.36	0.08	0.01
12/2/2014	0.13	0.08	0.01
12/3/2014	0.45	0.20	0.02
12/4/2014	0.00	0.00	0.00
12/5/2014	0.10	0.12	0.02
12/6/2014	1.01	0.20	0.02
12/7/2014	0.18	0.12	0.02
12/8/2014	0.00	0.00	0.00
<b>12/9/2014</b>	<b>2.25</b>	<b>0.64</b>	<b>0.06</b>
<b>12/10/2014</b>	<b>0.17</b>	<b>0.04</b>	<b>0.01</b>
<b>12/11/2014</b>	<b>0.13</b>	<b>0.08</b>	<b>0.01</b>
12/12/2014	0.01	0.04	0.01
12/13/2014	0.00	0.00	0.00
12/14/2014	0.00	0.00	0.00
12/15/2014	0.00	0.00	0.00
12/16/2014	0.00	0.00	0.00
12/17/2014	0.36	0.20	0.02
12/18/2014	0.05	0.04	0.01
12/19/2014	0.00	0.00	0.00
12/20/2014	0.00	0.00	0.00
12/21/2014	0.00	0.00	0.00
12/22/2014	0.04	0.04	0.01
12/23/2014	0.22	0.12	0.01
12/24/2014	0.45	0.20	0.02
12/25/2014	0.13	0.08	0.01
12/26/2014	0.00	0.00	0.00
12/27/2014	0.00	0.00	0.00
12/28/2014	0.02	0.04	0.01
12/29/2014	0.00	0.00	0.00
12/30/2014	0.00	0.00	0.00
12/31/2014	0.00	0.00	0.00
TOTAL	5.70		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

## **STONY BROOK RAIN GAUGE**

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

<b>Date</b>	<b>Daily Rainfall (in.)</b>	<b>Maximum Intensity (in./hr)</b>	<b>Average Intensity (in./hr)</b>
1/1/2014	0.00	0.00	0.00
1/2/2014	0.20	0.12	0.01
1/3/2014	0.10	0.04	0.01
1/4/2014	0.00	0.00	0.00
1/5/2014	0.04	0.08	0.02
1/6/2014	0.32	0.16	0.01
1/7/2014	0.00	0.00	0.00
1/8/2014	0.00	0.00	0.00
1/9/2014	0.00	0.00	0.00
1/10/2014	0.00	0.00	0.00
1/11/2014	0.60	0.52	0.03
1/12/2014	0.04	0.04	0.01
1/13/2014	0.00	0.00	0.00
1/14/2014	0.65	0.16	0.02
1/15/2014	0.01	0.04	0.01
1/16/2014	0.00	0.00	0.00
1/17/2014	0.00	0.00	0.00
1/18/2014	0.56	0.20	0.02
1/19/2014	0.03	0.04	0.01
1/20/2014	0.00	0.00	0.00
1/21/2014	0.05	0.04	0.01
1/22/2014	0.00	0.00	0.00
1/23/2014	0.00	0.00	0.00
1/24/2014	0.00	0.00	0.00
1/25/2014	0.00	0.00	0.00
1/26/2014	0.00	0.00	0.00
1/27/2014	0.01	0.04	0.01
1/28/2014	0.00	0.00	0.00
1/29/2014	0.00	0.00	0.00
1/30/2014	0.00	0.00	0.00
1/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>2.61</b>		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
2/1/2014	0.00	0.00	0.00
2/2/2014	0.03	0.04	0.01
2/3/2014	0.13	0.04	0.01
2/4/2014	0.03	0.08	0.02
2/5/2014	1.06	0.40	0.03
2/6/2014	0.00	0.00	0.00
2/7/2014	0.00	0.00	0.00
2/8/2014	0.00	0.00	0.00
2/9/2014	0.00	0.00	0.00
2/10/2014	0.00	0.00	0.00
2/11/2014	0.00	0.00	0.00
2/12/2014	0.00	0.00	0.00
2/13/2014	1.20	0.40	0.03
2/14/2014	0.40	0.32	0.03
2/15/2014	0.12	0.04	0.01
2/16/2014	0.00	0.00	0.00
2/17/2014	0.00	0.00	0.00
2/18/2014	0.38	0.32	0.02
2/19/2014	0.21	0.28	0.02
2/20/2014	0.09	0.12	0.02
2/21/2014	0.25	0.24	0.02
2/22/2014	0.01	0.04	0.01
2/23/2014	0.00	0.00	0.00
2/24/2014	0.00	0.00	0.00
2/25/2014	0.00	0.00	0.00
2/26/2014	0.00	0.00	0.00
2/27/2014	0.00	0.00	0.00
2/28/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>3.91</b>		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
3/1/2014	0.00	0.00	0.00
3/2/2014	0.00	0.00	0.00
3/3/2014	0.00	0.00	0.00
3/4/2014	0.00	0.00	0.00
3/5/2014	0.00	0.00	0.00
3/6/2014	0.00	0.00	0.00
3/7/2014	0.00	0.00	0.00
3/8/2014	0.00	0.00	0.00
3/9/2014	0.00	0.00	0.00
3/10/2014	0.00	0.00	0.00
3/11/2014	0.00	0.00	0.00
3/12/2014	0.39	0.20	0.02
3/13/2014	0.06	0.08	0.01
3/14/2014	0.00	0.00	0.00
3/15/2014	0.01	0.04	0.01
3/16/2014	0.00	0.00	0.00
3/17/2014	0.00	0.00	0.00
3/18/2014	0.00	0.00	0.00
3/19/2014	0.00	0.00	0.00
3/20/2014	0.36	0.20	0.02
3/21/2014	0.00	0.00	0.00
3/22/2014	0.00	0.00	0.00
3/23/2014	0.00	0.00	0.00
3/24/2014	0.00	0.00	0.00
3/25/2014	0.00	0.00	0.00
3/26/2014	0.00	0.00	0.00
3/27/2014	0.00	0.00	0.00
3/28/2014	0.02	0.04	0.01
3/29/2014	0.74	0.20	0.02
<b>3/30/2014</b>	<b>2.31</b>	<b>0.72</b>	<b>0.04</b>
<b>3/31/2014</b>	<b>0.60</b>	<b>0.36</b>	<b>0.02</b>
TOTAL	4.49		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.



# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
4/1/2014	0.00	0.00	0.00
4/2/2014	0.00	0.00	0.00
4/3/2014	0.00	0.00	0.00
4/4/2014	0.16	0.12	0.02
4/5/2014	0.21	0.28	0.02
4/6/2014	0.00	0.00	0.00
4/7/2014	0.00	0.00	0.00
4/8/2014	0.53	0.36	0.02
4/9/2014	0.00	0.00	0.00
4/10/2014	0.00	0.00	0.00
4/11/2014	0.00	0.00	0.00
4/12/2014	0.03	0.04	0.01
4/13/2014	0.03	0.04	0.01
4/14/2014	0.00	0.00	0.00
4/15/2014	0.85	0.28	0.02
4/16/2014	0.46	0.28	0.02
4/17/2014	0.00	0.00	0.00
4/18/2014	0.00	0.00	0.00
4/19/2014	0.00	0.00	0.00
4/20/2014	0.00	0.00	0.00
4/21/2014	0.00	0.00	0.00
4/22/2014	0.05	0.12	0.02
4/23/2014	0.49	0.24	0.03
4/24/2014	0.00	0.00	0.00
4/25/2014	0.00	0.00	0.00
4/26/2014	0.23	0.08	0.01
4/27/2014	0.13	0.16	0.02
4/28/2014	0.00	0.00	0.00
4/29/2014	0.00	0.00	0.00
4/30/2014	0.44	0.12	0.02
TOTAL	3.61		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
5/1/2014	0.74	0.24	0.02
5/2/2014	0.00	0.00	0.00
5/3/2014	0.00	0.00	0.00
5/4/2014	0.00	0.00	0.00
5/5/2014	0.00	0.00	0.00
5/6/2014	0.00	0.00	0.00
5/7/2014	0.00	0.00	0.00
5/8/2014	0.00	0.00	0.00
5/9/2014	0.01	0.04	0.01
5/10/2014	0.15	0.16	0.02
5/11/2014	0.00	0.00	0.00
5/12/2014	0.00	0.00	0.00
5/13/2014	0.00	0.00	0.00
5/14/2014	0.00	0.00	0.00
5/15/2014	0.00	0.00	0.00
5/16/2014	0.30	0.28	0.02
5/17/2014	0.77	0.60	0.06
5/18/2014	0.00	0.00	0.00
5/19/2014	0.03	0.04	0.01
5/20/2014	0.01	0.04	0.01
5/21/2014	0.00	0.00	0.00
5/22/2014	0.12	0.12	0.02
5/23/2014	0.01	0.04	0.01
5/24/2014	0.02	0.04	0.01
5/25/2014	0.00	0.00	0.00
5/26/2014	0.05	0.16	0.03
5/27/2014	0.57	0.72	0.06
5/28/2014	0.10	0.08	0.01
5/29/2014	0.00	0.00	0.00
5/30/2014	0.11	0.40	0.06
5/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>2.99</b>		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
6/1/2014	0.00	0.00	0.00
6/2/2014	0.00	0.00	0.00
6/3/2014	0.00	0.00	0.00
6/4/2014	0.28	0.24	0.03
6/5/2014	0.62	0.20	0.02
6/6/2014	0.00	0.00	0.00
6/7/2014	0.00	0.00	0.00
6/8/2014	0.00	0.00	0.00
6/9/2014	0.00	0.00	0.00
6/10/2014	0.00	0.00	0.00
6/11/2014	0.00	0.00	0.00
6/12/2014	0.00	0.00	0.00
6/13/2014	0.79	0.60	0.04
6/14/2014	0.00	0.00	0.00
6/15/2014	0.00	0.00	0.00
6/16/2014	0.00	0.00	0.00
6/17/2014	0.23	0.40	0.05
6/18/2014	0.03	0.08	0.02
6/19/2014	0.00	0.00	0.00
6/20/2014	0.00	0.00	0.00
6/21/2014	0.00	0.00	0.00
6/22/2014	0.00	0.00	0.00
6/23/2014	0.00	0.00	0.00
6/24/2014	0.00	0.00	0.00
6/25/2014	0.00	0.00	0.00
<b>6/26/2014</b>	<b>0.66</b>	<b>1.32</b>	<b>0.04</b>
6/27/2014	0.00	0.00	0.00
6/28/2014	0.00	0.00	0.00
6/29/2014	0.00	0.00	0.00
6/30/2014	0.00	0.00	0.00
TOTAL	2.61		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
7/1/2014	0.00	0.00	0.00
7/2/2014	0.00	0.00	0.00
<b>7/3/2014</b>	<b>0.34</b>	<b>1.28</b>	<b>0.17</b>
<b>7/4/2014</b>	<b>1.49</b>	<b>0.40</b>	<b>0.04</b>
<b>7/5/2014</b>	<b>0.24</b>	<b>0.24</b>	<b>0.02</b>
7/6/2014	0.00	0.00	0.00
<b>7/7/2014</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
7/8/2014	0.02	0.08	0.02
7/9/2014	0.00	0.00	0.00
7/10/2014	0.00	0.00	0.00
7/11/2014	0.00	0.00	0.00
7/12/2014	0.00	0.00	0.00
7/13/2014	0.01	0.04	0.01
7/14/2014	0.28	0.36	0.02
7/15/2014	0.22	0.68	0.07
<b>7/16/2014</b>	<b>2.31</b>	<b>2.40</b>	<b>0.15</b>
7/17/2014	0.00	0.00	0.00
7/18/2014	0.00	0.00	0.00
7/19/2014	0.00	0.00	0.00
7/20/2014	0.00	0.00	0.00
7/21/2014	0.00	0.00	0.00
7/22/2014	0.00	0.00	0.00
7/23/2014	0.00	0.00	0.00
7/24/2014	0.00	0.00	0.00
7/25/2014	0.00	0.00	0.00
7/26/2014	0.00	0.00	0.00
7/27/2014	0.27	0.36	0.03
<b>7/28/2014</b>	<b>1.68</b>	<b>3.84</b>	<b>0.24</b>
7/29/2014	0.00	0.00	0.00
7/30/2014	0.00	0.00	0.00
7/31/2014	0.00	0.00	0.00
TOTAL	6.86		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
8/1/2014	0.28	0.32	0.03
8/2/2014	0.03	0.04	0.01
8/3/2014	0.01	0.04	0.01
8/4/2014	0.00	0.00	0.00
8/5/2014	0.00	0.00	0.00
8/6/2014	0.01	0.04	0.01
8/7/2014	0.00	0.00	0.00
8/8/2014	0.00	0.00	0.00
8/9/2014	0.00	0.00	0.00
8/10/2014	0.00	0.00	0.00
8/11/2014	0.00	0.00	0.00
8/12/2014	0.00	0.00	0.00
<b>8/13/2014</b>	<b>1.54</b>	<b>0.36</b>	<b>0.03</b>
8/14/2014	0.00	0.00	0.00
8/15/2014	0.01	0.04	0.01
8/16/2014	0.00	0.00	0.00
8/17/2014	0.00	0.00	0.00
8/18/2014	0.00	0.00	0.00
8/19/2014	0.00	0.00	0.00
8/20/2014	0.00	0.00	0.00
8/21/2014	0.00	0.00	0.00
8/22/2014	0.11	0.20	0.02
8/23/2014	0.00	0.00	0.00
8/24/2014	0.00	0.00	0.00
8/25/2014	0.00	0.00	0.00
8/26/2014	0.00	0.00	0.00
8/27/2014	0.24	0.20	0.03
8/28/2014	0.00	0.00	0.00
8/29/2014	0.00	0.00	0.00
8/30/2014	0.00	0.00	0.00
<b>8/31/2014</b>	<b>0.51</b>	<b>0.92</b>	<b>0.06</b>
TOTAL	2.74		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
9/1/2014	0.01	0.04	0.01
<b>9/2/2014</b>	<b>0.54</b>	<b>1.04</b>	<b>0.09</b>
9/3/2014	0.00	0.00	0.00
9/4/2014	0.00	0.00	0.00
9/5/2014	0.00	0.00	0.00
<b>9/6/2014</b>	<b>0.14</b>	<b>0.40</b>	<b>0.07</b>
9/7/2014	0.03	0.04	0.01
9/8/2014	0.00	0.00	0.00
9/9/2014	0.00	0.00	0.00
9/10/2014	0.00	0.00	0.00
9/11/2014	0.00	0.00	0.00
9/12/2014	0.00	0.00	0.00
9/13/2014	0.21	0.20	0.02
9/14/2014	0.00	0.00	0.00
9/15/2014	0.00	0.00	0.00
9/16/2014	0.00	0.00	0.00
9/17/2014	0.00	0.00	0.00
9/18/2014	0.00	0.00	0.00
9/19/2014	0.00	0.00	0.00
9/20/2014	0.00	0.00	0.00
9/21/2014	0.39	0.84	0.07
9/22/2014	0.00	0.00	0.00
9/23/2014	0.00	0.00	0.00
9/24/2014	0.00	0.00	0.00
9/25/2014	0.00	0.00	0.00
9/26/2014	0.00	0.00	0.00
9/27/2014	0.00	0.00	0.00
9/28/2014	0.00	0.00	0.00
9/29/2014	0.00	0.00	0.00
9/30/2014	0.06	0.08	0.01
TOTAL	1.38		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
10/1/2014	0.84	0.40	0.03
10/2/2014	0.38	0.20	0.02
10/3/2014	0.01	0.04	0.01
10/4/2014	0.20	0.24	0.03
10/5/2014	0.00	0.00	0.00
10/6/2014	0.00	0.00	0.00
10/7/2014	0.00	0.00	0.00
10/8/2014	0.08	0.16	0.03
10/9/2014	0.00	0.00	0.00
10/10/2014	0.00	0.00	0.00
10/11/2014	0.28	0.12	0.01
10/12/2014	0.00	0.00	0.00
10/13/2014	0.00	0.00	0.00
10/14/2014	0.00	0.00	0.00
10/15/2014	0.00	0.00	0.00
10/16/2014	0.47	0.44	0.03
10/17/2014	0.01	0.04	0.01
10/18/2014	0.02	0.04	0.01
10/19/2014	0.00	0.00	0.00
10/20/2014	0.00	0.00	0.00
10/21/2014	0.00	0.00	0.00
10/22/2014	0.70	0.56	0.03
<b>10/23/2014</b>	<b>1.93</b>	<b>0.76</b>	<b>0.04</b>
10/24/2014	0.07	0.08	0.01
10/25/2014	0.00	0.00	0.00
10/26/2014	0.00	0.00	0.00
10/27/2014	0.00	0.00	0.00
10/28/2014	0.00	0.00	0.00
10/29/2014	0.05	0.04	0.01
10/30/2014	0.01	0.04	0.01
10/31/2014	0.00	0.00	0.00
TOTAL	5.05		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
11/1/2014	0.35	0.12	0.01
11/2/2014	0.13	0.08	0.01
11/3/2014	0.00	0.00	0.00
11/4/2014	0.00	0.00	0.00
11/5/2014	0.00	0.00	0.00
11/6/2014	0.40	0.16	0.02
11/7/2014	0.02	0.04	0.01
11/8/2014	0.00	0.00	0.00
11/9/2014	0.00	0.00	0.00
11/10/2014	0.00	0.00	0.00
11/11/2014	0.00	0.00	0.00
11/12/2014	0.00	0.00	0.00
11/13/2014	0.11	0.08	0.01
11/14/2014	0.22	0.08	0.01
11/15/2014	0.00	0.00	0.00
11/16/2014	0.00	0.00	0.00
<b>11/17/2014</b>	<b>1.63</b>	<b>0.44</b>	<b>0.03</b>
11/18/2014	0.00	0.00	0.00
11/19/2014	0.00	0.00	0.00
11/20/2014	0.00	0.00	0.00
11/21/2014	0.00	0.00	0.00
11/22/2014	0.00	0.00	0.00
11/23/2014	0.00	0.00	0.00
11/24/2014	0.36	0.12	0.02
11/25/2014	0.00	0.00	0.00
11/26/2014	0.75	0.24	0.02
11/27/2014	0.09	0.04	0.01
11/28/2014	0.01	0.04	0.01
11/29/2014	0.00	0.00	0.00
11/30/2014	0.00	0.00	0.00
TOTAL	4.07		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.



# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
12/1/2014	0.00	0.00	0.00
12/2/2014	0.15	0.08	0.01
12/3/2014	0.50	0.20	0.02
12/4/2014	0.00	0.00	0.00
12/5/2014	0.18	0.12	0.02
12/6/2014	1.08	0.24	0.02
12/7/2014	0.09	0.12	0.02
12/8/2014	0.00	0.00	0.00
<b>12/9/2014</b>	<b>1.74</b>	<b>0.64</b>	<b>0.04</b>
<b>12/10/2014</b>	<b>0.14</b>	<b>0.04</b>	<b>0.01</b>
<b>12/11/2014</b>	<b>0.09</b>	<b>0.04</b>	<b>0.01</b>
12/12/2014	0.00	0.00	0.00
12/13/2014	0.00	0.00	0.00
12/14/2014	0.00	0.00	0.00
12/15/2014	0.00	0.00	0.00
12/16/2014	0.00	0.00	0.00
12/17/2014	0.39	0.20	0.02
12/18/2014	0.04	0.04	0.01
12/19/2014	0.00	0.00	0.00
12/20/2014	0.00	0.00	0.00
12/21/2014	0.00	0.00	0.00
12/22/2014	0.02	0.04	0.01
12/23/2014	0.19	0.16	0.01
12/24/2014	0.22	0.08	0.01
12/25/2014	0.17	0.12	0.01
12/26/2014	0.00	0.00	0.00
12/27/2014	0.00	0.00	0.00
12/28/2014	0.02	0.04	0.01
12/29/2014	0.00	0.00	0.00
12/30/2014	0.00	0.00	0.00
12/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>5.02</b>		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

## **MUDDY RIVER RAIN GAUGE**

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT MUDDY RIVER, BROOKLINE, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
1/1/2014	0.00	0.00	0.00
1/2/2014	0.29	0.04	0.01
1/3/2014	0.06	0.04	0.01
1/4/2014	0.00	0.00	0.00
1/5/2014	0.03	0.04	0.01
1/6/2014	0.38	0.24	0.02
1/7/2014	0.00	0.00	0.00
1/8/2014	0.00	0.00	0.00
1/9/2014	0.00	0.00	0.00
1/10/2014	0.00	0.00	0.00
1/11/2014	0.55	0.56	0.03
1/12/2014	0.03	0.04	0.01
1/13/2014	0.00	0.00	0.00
1/14/2014	0.80	0.20	0.02
1/15/2014	0.01	0.04	0.01
1/16/2014	0.00	0.00	0.00
1/17/2014	0.00	0.00	0.00
1/18/2014	0.64	0.24	0.02
1/19/2014	0.02	0.04	0.01
1/20/2014	0.00	0.00	0.00
1/21/2014	0.03	0.04	0.01
1/22/2014	0.00	0.00	0.00
1/23/2014	0.00	0.00	0.00
1/24/2014	0.00	0.00	0.00
1/25/2014	0.00	0.00	0.00
1/26/2014	0.00	0.00	0.00
1/27/2014	0.02	0.04	0.01
1/28/2014	0.00	0.00	0.00
1/29/2014	0.00	0.00	0.00
1/30/2014	0.00	0.00	0.00
1/31/2014	0.00	0.00	0.00
<b>TOTAL</b>	<b>2.86</b>		

**Notes:**

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
2/1/2014	0.00	0.00	0.00
2/2/2014	0.34	1.32	0.17
2/3/2014	0.19	0.08	0.01
2/4/2014	0.00	0.00	0.00
2/5/2014	0.88	0.12	0.02
2/6/2014	0.14	0.04	0.01
2/7/2014	0.00	0.00	0.00
2/8/2014	0.00	0.00	0.00
2/9/2014	0.01	0.04	0.01
2/10/2014	0.00	0.00	0.00
2/11/2014	0.00	0.00	0.00
2/12/2014	0.00	0.00	0.00
2/13/2014	1.13	0.24	0.02
2/14/2014	0.40	0.36	0.03
2/15/2014	0.28	0.08	0.01
2/16/2014	0.03	0.04	0.01
2/17/2014	0.00	0.00	0.00
2/18/2014	0.32	0.08	0.01
2/19/2014	0.25	0.28	0.02
2/20/2014	0.09	0.16	0.02
2/21/2014	0.37	0.72	0.03
2/22/2014	0.00	0.00	0.00
2/23/2014	0.00	0.00	0.00
2/24/2014	0.00	0.00	0.00
2/25/2014	0.00	0.00	0.00
2/26/2014	0.00	0.00	0.00
2/27/2014	0.00	0.00	0.00
2/28/2014	0.00	0.00	0.00
TOTAL	4.43		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
3/1/2014	0.00	0.00	0.00
3/2/2014	0.00	0.00	0.00
3/3/2014	0.00	0.00	0.00
3/4/2014	0.00	0.00	0.00
3/5/2014	0.00	0.00	0.00
3/6/2014	0.00	0.00	0.00
3/7/2014	0.00	0.00	0.00
3/8/2014	0.00	0.00	0.00
3/9/2014	0.00	0.00	0.00
3/10/2014	0.01	0.04	0.01
3/11/2014	0.00	0.00	0.00
3/12/2014	0.34	0.20	0.02
3/13/2014	0.09	0.04	0.01
3/14/2014	0.00	0.00	0.00
3/15/2014	0.01	0.04	0.01
3/16/2014	0.00	0.00	0.00
3/17/2014	0.00	0.00	0.00
3/18/2014	0.00	0.00	0.00
3/19/2014	0.00	0.00	0.00
3/20/2014	0.28	0.20	0.02
3/21/2014	0.00	0.00	0.00
3/22/2014	0.00	0.00	0.00
3/23/2014	0.00	0.00	0.00
3/24/2014	0.00	0.00	0.00
3/25/2014	0.00	0.00	0.00
3/26/2014	0.00	0.00	0.00
3/27/2014	0.00	0.00	0.00
3/28/2014	0.02	0.04	0.01
3/29/2014	0.74	0.24	0.02
<b>3/30/2014</b>	<b>1.90</b>	<b>0.52</b>	<b>0.03</b>
<b>3/31/2014</b>	<b>0.39</b>	<b>0.16</b>	<b>0.02</b>
TOTAL	3.78		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
2014 DAILY RAINFALL DATA  
USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
4/1/2014	0.00	0.00	0.00
4/2/2014	0.00	0.00	0.00
4/3/2014	0.00	0.00	0.00
4/4/2014	0.19	0.12	0.02
4/5/2014	0.21	0.20	0.02
4/6/2014	0.00	0.00	0.00
4/7/2014	0.04	0.08	0.01
4/8/2014	0.56	0.28	0.02
4/9/2014	0.00	0.00	0.00
4/10/2014	0.00	0.00	0.00
4/11/2014	0.00	0.00	0.00
4/12/2014	0.05	0.04	0.01
4/13/2014	0.04	0.08	0.01
4/14/2014	0.00	0.00	0.00
4/15/2014	0.78	0.20	0.02
4/16/2014	0.50	0.20	0.02
4/17/2014	0.00	0.00	0.00
4/18/2014	0.00	0.00	0.00
4/19/2014	0.00	0.00	0.00
4/20/2014	0.00	0.00	0.00
4/21/2014	0.00	0.00	0.00
4/22/2014	0.06	0.08	0.02
4/23/2014	0.25	0.16	0.02
4/24/2014	0.00	0.00	0.00
4/25/2014	0.00	0.00	0.00
4/26/2014	0.21	0.08	0.01
4/27/2014	0.17	0.08	0.01
4/28/2014	0.00	0.00	0.00
4/29/2014	0.00	0.00	0.00
4/30/2014	0.31	0.16	0.01
<b>TOTAL</b>	<b>3.37</b>		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
5/1/2014	0.72	0.36	0.02
5/2/2014	0.00	0.00	0.00
5/3/2014	0.00	0.00	0.00
5/4/2014	0.00	0.00	0.00
5/5/2014	0.00	0.00	0.00
5/6/2014	0.00	0.00	0.00
5/7/2014	0.00	0.00	0.00
5/8/2014	0.00	0.00	0.00
5/9/2014	0.00	0.00	0.00
5/10/2014	0.29	0.40	0.05
5/11/2014	0.00	0.00	0.00
5/12/2014	0.00	0.00	0.00
5/13/2014	0.00	0.00	0.00
5/14/2014	0.00	0.00	0.00
5/15/2014	0.00	0.00	0.00
5/16/2014	0.16	0.20	0.02
5/17/2014	0.64	0.60	0.05
5/18/2014	0.00	0.00	0.00
5/19/2014	0.07	0.08	0.01
5/20/2014	0.02	0.04	0.01
5/21/2014	0.00	0.00	0.00
5/22/2014	0.11	0.12	0.02
5/23/2014	0.02	0.04	0.01
5/24/2014	0.06	0.08	0.02
5/25/2014	0.00	0.00	0.00
5/26/2014	0.02	0.04	0.01
5/27/2014	0.36	0.36	0.03
5/28/2014	0.10	0.04	0.01
5/29/2014	0.00	0.00	0.00
5/30/2014	0.06	0.12	0.02
5/31/2014	0.00	0.00	0.00
TOTAL	2.63		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
6/1/2014	0.00	0.00	0.00
6/2/2014	0.00	0.00	0.00
6/3/2014	0.00	0.00	0.00
6/4/2014	0.11	0.08	0.01
6/5/2014	0.69	0.20	0.02
6/6/2014	0.00	0.00	0.00
6/7/2014	0.00	0.00	0.00
6/8/2014	0.00	0.00	0.00
6/9/2014	0.00	0.00	0.00
6/10/2014	0.03	0.08	0.02
6/11/2014	0.00	0.00	0.00
6/12/2014	0.00	0.00	0.00
6/13/2014	0.42	0.24	0.02
6/14/2014	0.02	0.04	0.01
6/15/2014	0.00	0.00	0.00
6/16/2014	0.00	0.00	0.00
6/17/2014	0.29	0.72	0.07
6/18/2014	0.01	0.04	0.01
6/19/2014	0.00	0.00	0.00
6/20/2014	0.00	0.00	0.00
6/21/2014	0.00	0.00	0.00
6/22/2014	0.00	0.00	0.00
6/23/2014	0.00	0.00	0.00
6/24/2014	0.00	0.00	0.00
6/25/2014	0.00	0.00	0.00
<b>6/26/2014</b>	<b>0.41</b>	<b>0.84</b>	<b>0.03</b>
6/27/2014	0.00	0.00	0.00
6/28/2014	0.00	0.00	0.00
6/29/2014	0.00	0.00	0.00
6/30/2014	0.00	0.00	0.00
TOTAL	1.98		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.



# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
7/1/2014	0.00	0.00	0.00
7/2/2014	0.00	0.00	0.00
<b>7/3/2014</b>	<b>0.31</b>	<b>1.24</b>	<b>0.31</b>
<b>7/4/2014</b>	<b>1.87</b>	<b>0.40</b>	<b>0.04</b>
<b>7/5/2014</b>	<b>0.39</b>	<b>0.28</b>	<b>0.02</b>
7/6/2014	0.00	0.00	0.00
7/7/2014	0.00	0.00	0.00
7/8/2014	0.00	0.00	0.00
7/9/2014	0.00	0.00	0.00
7/10/2014	0.00	0.00	0.00
7/11/2014	0.00	0.00	0.00
7/12/2014	0.00	0.00	0.00
7/13/2014	0.00	0.00	0.00
7/14/2014	0.64	1.32	0.06
7/15/2014	0.01	0.04	0.01
7/16/2014	0.64	1.16	0.04
7/17/2014	0.00	0.00	0.00
7/18/2014	0.00	0.00	0.00
7/19/2014	0.00	0.00	0.00
7/20/2014	0.00	0.00	0.00
7/21/2014	0.00	0.00	0.00
7/22/2014	0.00	0.00	0.00
7/23/2014	0.00	0.00	0.00
7/24/2014	0.00	0.00	0.00
7/25/2014	0.00	0.00	0.00
7/26/2014	0.00	0.00	0.00
7/27/2014	0.28	0.24	0.03
7/28/2014	1.37	3.32	0.46
7/29/2014	0.00	0.00	0.00
7/30/2014	0.00	0.00	0.00
7/31/2014	0.00	0.00	0.00
TOTAL	5.51		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
2014 DAILY RAINFALL DATA  
USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
8/1/2014	0.00	0.00	0.00
8/2/2014	0.03	0.04	0.01
8/3/2014	0.00	0.00	0.00
8/4/2014	0.00	0.00	0.00
8/5/2014	0.00	0.00	0.00
8/6/2014	0.02	0.08	0.02
8/7/2014	0.04	0.08	0.02
8/8/2014	0.00	0.00	0.00
8/9/2014	0.00	0.00	0.00
8/10/2014	0.00	0.00	0.00
8/11/2014	0.00	0.00	0.00
8/12/2014	0.00	0.00	0.00
<b>8/13/2014</b>	<b>1.25</b>	<b>0.48</b>	<b>0.03</b>
8/14/2014	0.01	0.04	0.01
8/15/2014	0.00	0.00	0.00
8/16/2014	0.00	0.00	0.00
8/17/2014	0.00	0.00	0.00
8/18/2014	0.00	0.00	0.00
8/19/2014	0.00	0.00	0.00
8/20/2014	0.00	0.00	0.00
8/21/2014	0.00	0.00	0.00
8/22/2014	0.08	0.24	0.03
8/23/2014	0.00	0.00	0.00
8/24/2014	0.00	0.00	0.00
8/25/2014	0.00	0.00	0.00
8/26/2014	0.00	0.00	0.00
8/27/2014	0.04	0.08	0.01
8/28/2014	0.00	0.00	0.00
8/29/2014	0.00	0.00	0.00
8/30/2014	0.00	0.00	0.00
<b>8/31/2014</b>	<b>0.37</b>	<b>0.60</b>	<b>0.05</b>
TOTAL	1.84		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS  
 2014 DAILY RAINFALL DATA  
 USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
9/1/2014	0.00	0.00	0.00
<b>9/2/2014</b>	<b>0.04</b>	<b>0.12</b>	<b>0.02</b>
9/3/2014	0.00	0.00	0.00
9/4/2014	0.00	0.00	0.00
9/5/2014	0.00	0.00	0.00
<b>9/6/2014</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
9/7/2014	0.11	0.24	0.02
9/8/2014	0.00	0.00	0.00
9/9/2014	0.00	0.00	0.00
9/10/2014	0.00	0.00	0.00
9/11/2014	0.00	0.00	0.00
9/12/2014	0.00	0.00	0.00
9/13/2014	0.17	0.12	0.02
9/14/2014	0.00	0.00	0.00
9/15/2014	0.00	0.00	0.00
9/16/2014	0.00	0.00	0.00
9/17/2014	0.00	0.00	0.00
9/18/2014	0.00	0.00	0.00
9/19/2014	0.00	0.00	0.00
9/20/2014	0.00	0.00	0.00
9/21/2014	0.14	0.32	0.07
9/22/2014	0.00	0.00	0.00
9/23/2014	0.00	0.00	0.00
9/24/2014	0.00	0.00	0.00
9/25/2014	0.00	0.00	0.00
9/26/2014	0.00	0.00	0.00
9/27/2014	0.00	0.00	0.00
9/28/2014	0.00	0.00	0.00
9/29/2014	0.00	0.00	0.00
9/30/2014	0.15	0.08	0.01
TOTAL	0.61		

Notes:

Rainfall was measured in fifteen minute intervals  
 Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
10/1/2014	0.94	0.36	0.03
10/2/2014	0.22	0.12	0.01
10/3/2014	0.01	0.04	0.01
10/4/2014	0.19	0.24	0.02
10/5/2014	0.00	0.00	0.00
10/6/2014	0.00	0.00	0.00
10/7/2014	0.00	0.00	0.00
10/8/2014	0.00	0.00	0.00
10/9/2014	0.00	0.00	0.00
10/10/2014	0.00	0.00	0.00
10/11/2014	0.34	0.20	0.02
10/12/2014	0.00	0.00	0.00
10/13/2014	0.00	0.00	0.00
10/14/2014	0.00	0.00	0.00
10/15/2014	0.00	0.00	0.00
10/16/2014	0.47	0.32	0.02
10/17/2014	0.01	0.04	0.01
10/18/2014	0.00	0.00	0.00
10/19/2014	0.00	0.00	0.00
10/20/2014	0.00	0.00	0.00
10/21/2014	0.04	0.12	0.02
10/22/2014	0.74	0.56	0.03
<b>10/23/2014</b>	<b>2.16</b>	<b>0.68</b>	<b>0.04</b>
10/24/2014	0.16	0.16	0.02
10/25/2014	0.00	0.00	0.00
10/26/2014	0.00	0.00	0.00
10/27/2014	0.00	0.00	0.00
10/28/2014	0.00	0.00	0.00
10/29/2014	0.05	0.08	0.01
10/30/2014	0.00	0.00	0.00
10/31/2014	0.00	0.00	0.00
TOTAL	5.33		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

USGS METER AT STONY BROOK, WALTHAM, MA

Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
11/1/2014	0.51	0.12	0.02
11/2/2014	0.26	0.12	0.02
11/3/2014	0.00	0.00	0.00
11/4/2014	0.00	0.00	0.00
11/5/2014	0.00	0.00	0.00
11/6/2014	0.66	0.24	0.02
11/7/2014	0.00	0.00	0.00
11/8/2014	0.00	0.00	0.00
11/9/2014	0.00	0.00	0.00
11/10/2014	0.00	0.00	0.00
11/11/2014	0.00	0.00	0.00
11/12/2014	0.00	0.00	0.00
11/13/2014	0.08	0.08	0.01
11/14/2014	0.25	0.08	0.01
11/15/2014	0.00	0.00	0.00
11/16/2014	0.00	0.00	0.00
<b>11/17/2014</b>	<b>1.52</b>	<b>0.48</b>	<b>0.03</b>
11/18/2014	0.01	0.04	0.01
11/19/2014	0.00	0.00	0.00
11/20/2014	0.00	0.00	0.00
11/21/2014	0.00	0.00	0.00
11/22/2014	0.00	0.00	0.00
11/23/2014	0.00	0.00	0.00
11/24/2014	0.29	0.12	0.02
11/25/2014	0.00	0.00	0.00
11/26/2014	1.53	0.28	0.03
11/27/2014	0.05	0.04	0.01
11/28/2014	0.05	0.04	0.01
11/29/2014	0.00	0.00	0.00
11/30/2014	0.00	0.00	0.00
TOTAL	5.21		

Notes:

Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.

# CSO NPDES Annual Report | 2014

CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS

2014 DAILY RAINFALL DATA

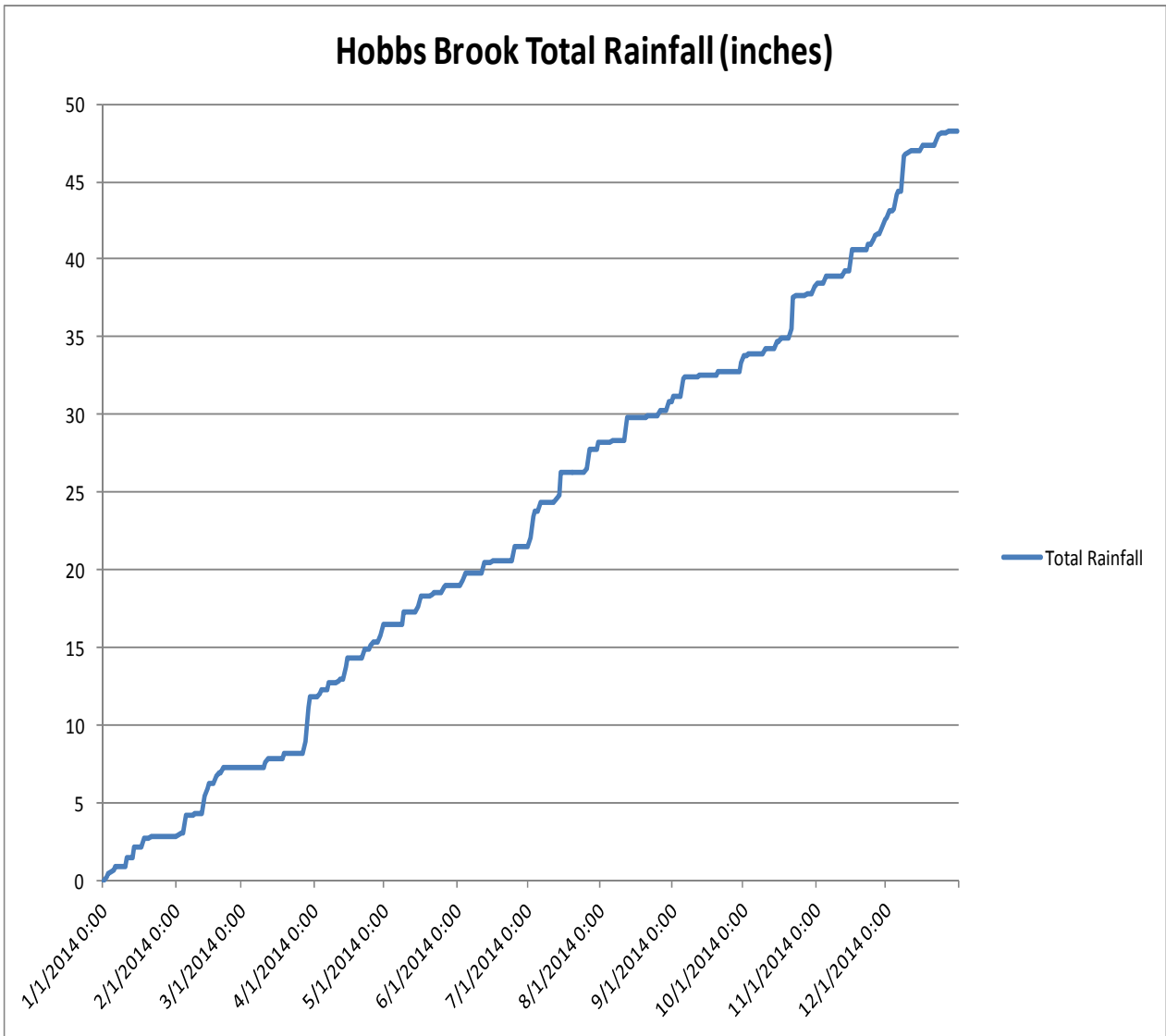
USGS METER AT STONY BROOK, WALTHAM, MA

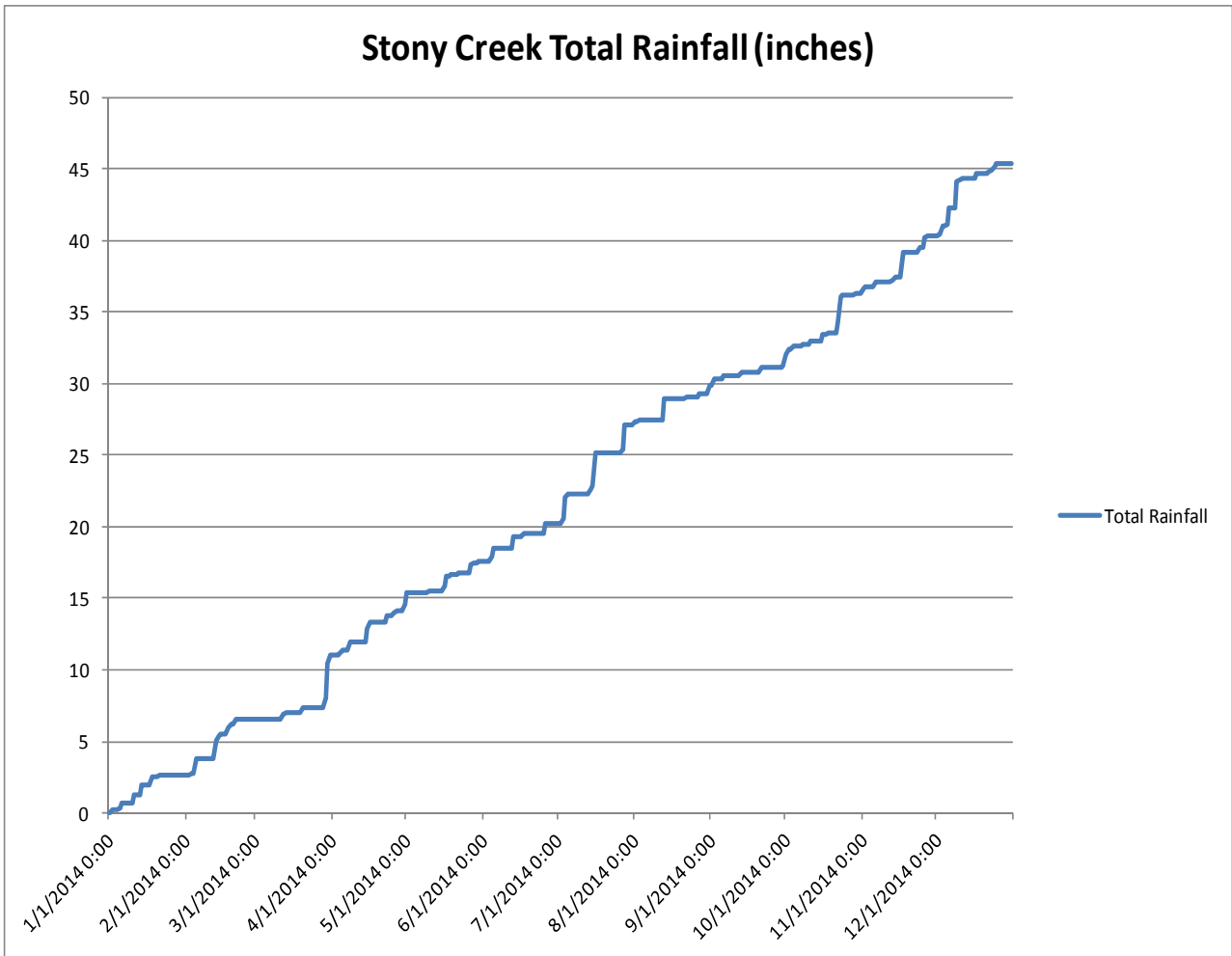
Date	Daily Rainfall (in.)	Maximum Intensity (in./hr)	Average Intensity (in./hr)
12/1/2014	0.01	0.04	0.01
12/2/2014	0.12	0.08	0.01
12/3/2014	0.44	0.28	0.02
12/4/2014	0.00	0.00	0.00
12/5/2014	0.12	0.12	0.02
12/6/2014	0.94	0.16	0.02
12/7/2014	0.11	0.16	0.02
12/8/2014	0.00	0.00	0.00
<b>12/9/2014</b>	<b>3.89</b>	<b>0.80</b>	<b>0.05</b>
<b>12/10/2014</b>	<b>0.27</b>	<b>0.08</b>	<b>0.01</b>
<b>12/11/2014</b>	<b>0.06</b>	<b>0.04</b>	<b>0.01</b>
12/12/2014	0.00	0.00	0.00
12/13/2014	0.00	0.00	0.00
12/14/2014	0.00	0.00	0.00
12/15/2014	0.00	0.00	0.00
12/16/2014	0.00	0.00	0.00
12/17/2014	0.35	0.24	0.02
12/18/2014	0.03	0.04	0.01
12/19/2014	0.00	0.00	0.00
12/20/2014	0.00	0.00	0.00
12/21/2014	0.00	0.00	0.00
12/22/2014	0.00	0.00	0.00
12/23/2014	0.24	0.04	0.01
12/24/2014	0.54	0.40	0.02
12/25/2014	0.18	0.12	0.02
12/26/2014	0.00	0.00	0.00
12/27/2014	0.00	0.00	0.00
12/28/2014	0.01	0.04	0.01
12/29/2014	0.00	0.00	0.00
12/30/2014	0.00	0.00	0.00
12/31/2014	0.00	0.00	0.00
TOTAL	7.31		

Notes:

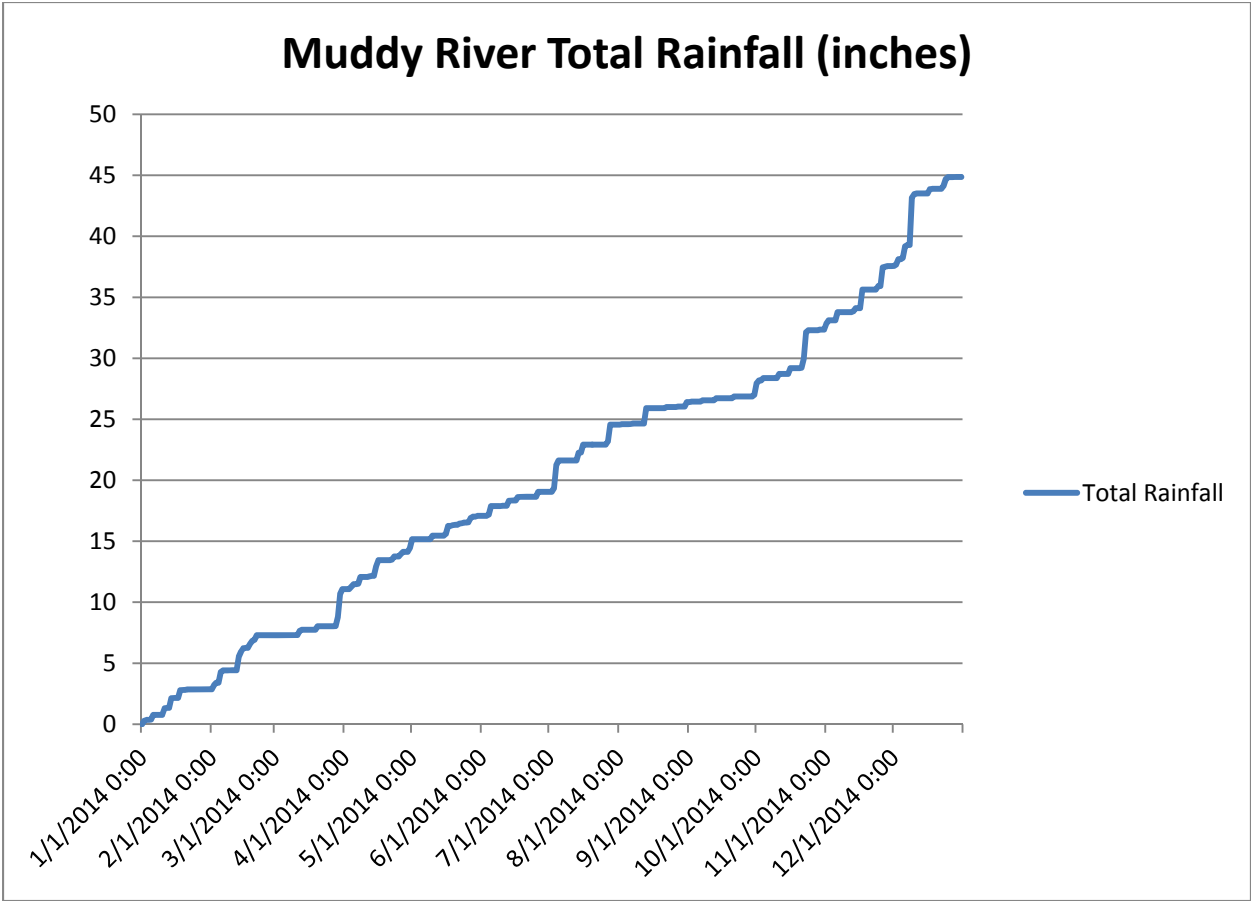
Rainfall was measured in fifteen minute intervals

Bolded Data denotes CSO discharge.









## **APPENDIX II**

### January 2014 Daily Rainfall and Combined Sewer Overflows

January	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Alewife Brook	CAM 002 Mass Ave. @ Alewife Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River	
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-181,468.30	0.00	0.00	0.00
2	N/A	0.24	0.20	0.29	0.00	0.00	0.00	0.00	0.00	0.00	-72,288.55	0.00	0.00	0.00
3	N/A	0.23	0.10	0.06	0.00	0.00	0.00	0.00	0.00	0.00	-29,183.17	0.00	0.00	0.00
4	N/A	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-15,415.31	0.00	0.00	0.00
5	N/A	0.06	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	-11,251.94	0.00	0.00	0.00
6	N/A	0.31	0.32	0.38	0.00	0.00	0.00	0.00	0.00	0.00	-16,345.96	0.00	0.00	0.00
7	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-22,714.21	0.00	0.00	0.00
8	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-29,370.10	0.00	0.00	0.00
9	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-26,246.77	0.00	0.00	0.00
10	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-28,977.19	0.00	0.00	0.00
11	N/A	0.51	0.60	0.55	0.00	0.00	0.00	0.00	0.00	0.00	-6,009.98	0.00	0.00	0.00
12	N/A	0.06	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	-19,857.52	0.00	0.00	0.00
13	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-35,490.00	0.00	0.00	0.00
14	N/A	0.63	0.65	0.80	0.00	0.00	0.00	0.00	0.00	0.00	-155,115.99	0.00	0.00	0.00
15	N/A	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-693,113.36	0.00	0.00	0.00
16	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-233,401.62	0.00	0.00	0.00
17	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-193,423.15	0.00	0.00	0.00
18	N/A	0.58	0.56	0.64	0.00	0.00	0.00	0.00	0.00	0.00	-13,386.34	0.00	0.00	0.00
19	N/A	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	-13,708.27	0.00	0.00	0.00
20	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-18,086.42	0.00	0.00	0.00
21	N/A	0.06	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	-20,072.58	0.00	0.00	0.00
22	N/A	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-26,122.60	0.00	0.00	0.00
23	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-21,761.92	0.00	0.00	0.00
24	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-21,503.38	0.00	0.00	0.00
25	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-20,155.58	0.00	0.00	0.00
26	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-25,718.34	0.00	0.00	0.00
27	N/A	0.04	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	-18,798.88	0.00	0.00	0.00
28	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-33,314.63	0.00	0.00	0.00
29	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-13,068.22	0.00	0.00	0.00
30	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-17,194.66	0.00	0.00	0.00
31	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-48,697.13	0.00	0.00	0.00
<b>Total</b>	N/A	2.87	2.61	2.86	0.00	0.00	0.00	0.00	0.00	0.00	-2,081,262.06	0.00	0.00	0.00

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011



### March 2014 Daily Rainfall and Combined Sewer Overflows

March	Rain Gauges				Alewife Brook					Charles River			Total	
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001	CAM 002	CAM 401B	CAM 004	401A	CAM 005	CAM 007			CAM 017
	(in)	(in)	(in)	(in)	Foch St. @ Alewife Alewife Brook	Mass Ave. @ Alewife Alewife Brook	Columbus @ Mass Ave. Alewife Brook	Concord Ave @ Rotary Alewife Brook	Sherman St. Alewife Brook	Lowell St. @ Mt. Auburn St Charles River	Hawthorne St. @ Memorial Dr. Charles River			Edwin Land Blvd. @ Binney St. Charles River
1	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-205,493.88	0.00	0.00	0.00
2	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-164,783.57	0.00	0.00	0.00
3	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-58,421.81	0.00	0.00	0.00
4	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-49,173.02	0.00	0.00	0.00
5	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-24,594.07	0.00	0.00	0.00
6	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-39,712.54	0.00	0.00	0.00
7	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-21,957.84	0.00	0.00	0.00
8	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-29,099.66	0.00	0.00	0.00
9	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-30,855.54	0.00	0.00	0.00
10	N/A	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-29,094.59	0.00	0.00	0.00
11	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	N/A	0.44	0.39	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	N/A	0.13	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-80,361.21	0.00	0.00	0.00
15	N/A	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-16,405.57	0.00	0.00	0.00
16	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-164,647.68	0.00	0.00	0.00
17	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-134,360.89	0.00	0.00	0.00
18	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-124,846.10	0.00	0.00	0.00
19	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-213,865.91	0.00	0.00	0.00
20	N/A	0.36	0.36	0.28	0.00	0.00	0.00	0.00	0.00	0.00	-16,970.94	0.00	0.00	0.00
21	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-20,878.66	0.00	0.00	0.00
22	N/A	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-13,192.81	0.00	0.00	0.00
23	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-21,027.63	0.00	0.00	0.00
24	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-11,074.05	0.00	0.00	0.00
25	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	N/A	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	N/A	0.73	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	-87,654.90	0.00	0.00	0.00
30	N/A	2.24	2.31	1.90	100.50	2,762.19	1,230,725.00	12,929.79	0.00	0.00	-3,549.66	0.00	0.00	1,246,517.48
31	N/A	0.66	0.60	0.39	320.37	9,551.55	8,268,105.00	0.00	0.00	0.00	-7,440.50	0.00	0.00	8,277,976.92
Total	N/A	4.62	4.49	3.78	420.87	12,313.74	9,498,830.00	12,929.79	0.00	0.00	-1,569,463.05	0.00	0.00	9,524,494.40

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011

### April 2014 Daily Rainfall and Combined Sewer Overflows

April	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001	CAM 002	CAM 401B	CAM 004	401A	CAM 005	CAM 007		CAM 017	
					Foch St. @ Alewife Brook	Mass Ave. @ Alewife Brook	Columbus @ Mass Ave. Alewife Brook	Concord Ave @ Rotary Alewife Brook	Sherman St. Alewife Brook	Lowell St. @ Mt. Auburn St Charles River	Hawthorne St. @ Memorial Dr. Charles River		Edwin Land Blvd. @ Binney St. Charles River	
(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-343,622.83	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-355,713.28	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-325,428.36	0.00	0.00	0.00
4	0.22	0.15	0.16	0.19	0.00	0.00	0.00	0.00	0.00	0.00	-359,783.57	0.00	0.00	0.00
5	0.27	0.28	0.21	0.21	0.00	0.00	0.00	0.00	0.00	0.00	-9,952.83	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-10,311.05	0.00	0.00	0.00
7	0.02	0.01	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	-5,954.83	0.00	0.00	0.00
8	0.61	0.48	0.53	0.56	0.00	0.00	0.00	0.00	0.00	0.00	-8,748.34	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.04	0.09	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.03	0.05	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	1.09	0.84	0.85	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.52	0.53	0.46	0.50	0.00	0.00	0.00	0.00	0.00	0.00	-91,180.61	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-227,788.66	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-142,764.65	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-174,611.12	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-177,081.17	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-168,703.10	0.00	0.00	0.00
22	0.05	0.06	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.26	0.54	0.49	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.28	0.23	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.19	0.13	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-80,025.92	0.00	0.00	0.00
29	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-2,054.74	0.00	0.00	0.00
30	0.00	0.42	0.44	0.31	0.00	0.00	0.00	0.00	0.00	0.00	-4,440.37	0.00	0.00	0.00
														0.00
<b>Total</b>	3.11	3.93	3.61	3.37	0.00	0.00	0.00	0.00	0.00	0.00	-2,488,165.40	0.00	0.00	0.00

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011

### May 2014 Daily Rainfall and Combined Sewer Overflows

May	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Brook	CAM 002 Mass Ave. @ Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River	
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	0.00	0.70	0.74	0.72	0.00	0.00	0.00	0.00	0.00	0.00	-7,740.34	0.00	0.00	0.00
2	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-13,781.17	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-34,267.13	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-265,954.23	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-291,716.37	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-259,026.39	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.48	0.84	0.15	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.15	0.28	0.30	0.16	0.00	0.00	0.00	0.00	0.00	0.00	-368,056.42	0.00	0.00	0.00
17	0.90	0.66	0.77	0.64	0.00	0.00	0.00	0.00	0.00	0.00	-3,028.03	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-32,386.13	0.00	0.00	0.00
19	0.07	0.05	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	-30,228.03	0.00	0.00	0.00
20	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	-36,715.88	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.14	0.13	0.12	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	-335,043.04	0.00	0.00	0.00
24	0.09	0.06	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-383,833.38	0.00	0.00	0.00
26	0.00	0.05	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.34	0.23	0.57	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.12	0.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.11	0.05	0.11	0.06	0.00	0.00	0.00	0.00	0.00	0.00	-189,110.99	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-26,054.20	0.00	0.00	0.00
<b>Total</b>	<b>2.43</b>	<b>3.25</b>	<b>2.99</b>	<b>2.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-2,276,941.73</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011

**June 2014 Daily Rainfall and Combined Sewer Overflows**

June	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Brook	CAM 002 Mass Ave. @ Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River	
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-39,262.83	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-29,205.64	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-31,747.27	0.00	0.00	0.00
4	0.13	0.30	0.28	0.11	0.00	0.00	0.00	0.00	0.00	0.00	-58,640.53	0.00	0.00	0.00
5	0.70	0.48	0.62	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.47	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	-447,677.01	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-398,542.69	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-400,752.36	0.00	0.00	0.00
13	0.60	0.65	0.79	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.01	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.11	0.23	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.71	0.90	0.66	0.41	0.00	0.00	0.00	9,798.91	0.00	0.00	0.00	0.00	0.00	9,798.91
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-388,662.45	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-425,335.54	0.00	0.00	0.00
<b>Total</b>	2.62	2.49	2.61	1.98	0.00	0.00	0.00	9,798.91	0.00	0.00	-2,219,826.32	0.00	0.00	9,798.91

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011



### July 2014 Daily Rainfall and Combined Sewer Overflows

July	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Alewife Brook	CAM 002 Mass Ave. @ Alewife Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River	
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-431,255.94	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-426,878.88	0.00	0.00	0.00
3	0.28	0.58	0.34	0.31	0.00	0.00	104.04	0.00	0.00	0.00	0.00	0.00	0.00	104.04
4	2.00	1.36	1.49	1.87	0.00	44,989.80	3,827,430.00	55,751.97	166,795.60	0.00	0.00	0.00	0.00	4,094,967.37
5	0.43	0.27	0.24	0.39	0.00	0.00	40,528.47	5,513.33	0.00	0.00	0.00	0.00	0.00	46,041.80
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.16	0.62	0.00	0.00	316.52	37,237.10	625,654.70	0.00	0.00	0.00	0.00	0.00	0.00	663,208.32
8	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.27	0.23	0.28	0.64	0.00	0.00	0.00	0.00	0.00	0.00	-66,220.45	0.00	0.00	0.00
15	0.01	0.17	0.22	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-45,784.77	0.00	0.00	0.00
16	0.80	1.55	2.31	0.64	471.27	107,080.00	1,041,841.00	555,258.67	74,470.58	0.00	0.00	0.00	0.00	1,779,121.52
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-823,383.07	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-424,857.22	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-421,410.95	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.34	0.15	0.27	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	1.49	1.24	1.68	1.37	5,723.11	331,309.00	1,251,377.00	18,944,295.00	8,025,203.80	887,635.60	0.00	83273.269	1,188,980.00	30,717,796.78
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>6.28</b>	<b>6.20</b>	<b>6.86</b>	<b>5.51</b>	<b>6,510.90</b>	<b>520,615.90</b>	<b>6,786,935.21</b>	<b>19,560,818.97</b>	<b>8,266,469.98</b>	<b>887,635.60</b>	<b>-2,639,791.28</b>	<b>83,273.27</b>	<b>1,188,980.00</b>	<b>36,413,604.23</b>

Alewife Brook outfall CAM002B is temporarily plugged  
 Charles River outfalls CAM009 and CAM011 are temporarily plugged  
 CAM 400 Permanently closed on March 31, 2011

**August 2014 Daily Rainfall and Combined Sewer Overflows**

August	Rain Gauges				Alewife Brook					Charles River				Total	
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Alewife Brook	CAM 002 Mass Ave. @ Alewife Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River		
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)		
1	0.50	0.50	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
2	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
3	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
6	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
7	0.07	0.08	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-412,428.81	0.00	0.00	0.00	<b>0.00</b>
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-810,723.58	0.00	0.00	0.00	<b>0.00</b>
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-10,080.22	0.00	0.00	0.00	<b>0.00</b>
13	1.64	1.48	1.54	1.25	0.00	294,208.20	0.00	0.00	0.00	0.00	-46,845.41	0.00	0.00	0.00	<b>294,208.20</b>
14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-45,250.19	0.00	0.00	0.00	<b>0.00</b>
15	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-13,188.02	0.00	0.00	0.00	<b>0.00</b>
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-39,779.75	0.00	0.00	0.00	<b>0.00</b>
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-39,752.85	0.00	0.00	0.00	<b>0.00</b>
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-75,707.50	0.00	0.00	0.00	<b>0.00</b>
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-85,798.87	0.00	0.00	0.00	<b>0.00</b>
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-84,964.94	0.00	0.00	0.00	<b>0.00</b>
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-82,405.62	0.00	0.00	0.00	<b>0.00</b>
22	0.11	0.14	0.11	0.08	0.00	0.00	0.00	0.00	0.00	0.00	-78,899.64	0.00	0.00	0.00	<b>0.00</b>
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-82,829.09	0.00	0.00	0.00	<b>0.00</b>
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-85,663.95	0.00	0.00	0.00	<b>0.00</b>
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-80,013.67	0.00	0.00	0.00	<b>0.00</b>
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-74,096.20	0.00	0.00	0.00	<b>0.00</b>
27	0.07	0.29	0.24	0.04	0.00	0.00	0.00	0.00	0.00	0.00	-74,913.60	0.00	0.00	0.00	<b>0.00</b>
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-84,517.72	0.00	0.00	0.00	<b>0.00</b>
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-91,177.33	0.00	0.00	0.00	<b>0.00</b>
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-84,040.10	0.00	0.00	0.00	<b>0.00</b>
31	0.47	0.60	0.51	0.37	0.00	104,811.60	0.00	0.00	0.00	0.00	-88,936.12	0.00	0.00	0.00	<b>104,811.60</b>
<b>Total</b>	<b>2.87</b>	<b>3.13</b>	<b>2.74</b>	<b>1.84</b>	<b>0.00</b>	<b>399,019.80</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-2,572,013.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>399,019.80</b>

Alewife Brook outfall CAM002B is temporarily plugged  
 Charles River outfalls CAM009 and CAM011 are temporarily plugged  
 CAM 400 Permanently closed on March 31, 2011



**September 2014 Daily Rainfall and Combined Sewer Overflows**

September	Rain Gauges				Alewife Brook					Charles River			Total		
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001	CAM 002		CAM 401B	CAM 004	401A	CAM 005	CAM 007		CAM 017	
					Foch St. @ Alewife Brook	Mass Ave. @ Alewife Brook	Columbus @ Mass Ave. Alewife Brook	Concord Ave @ Rotary Alewife Brook	Sherman St. Alewife Brook	Lowell St. @ Mt. Auburn St Charles River	Hawthorne St. @ Memorial Dr. Charles River			Edwin Land Blvd. @ Binney St. Charles River	
(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)		
1	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-57,253.72	0.00	0.00	0.00
2	0.40	0.31	0.54	0.04	0.00	224,344.80	0.00	0.00	0.00	0.00	0.00	-88,925.86	0.00	0.00	224,344.80
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-79,320.02	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-92,380.54	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-74,178.46	0.00	0.00	0.00
6	0.16	1.17	0.14	0.00	0.00	383,036.20	76,392.70	908,282.72	0.00	0.00	0.00	-17,885.69	0.00	0.00	1,367,711.62
7	0.11	0.06	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-24,888.33	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-67,291.50	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-75,947.09	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-87,327.47	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-92,609.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-79,766.61	0.00	0.00	0.00
13	0.15	0.17	0.21	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-60,554.99	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-57,900.81	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-82,575.58	0.00	0.00	0.00
16	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-102,342.66	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-104,462.87	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-108,582.28	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-110,822.12	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-110,046.92	0.00	0.00	0.00
21	0.04	0.17	0.39	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-106,223.03	0.00	0.00	0.00
22	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-115,056.91	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-108,564.80	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-83,178.30	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-59,609.41	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-64,768.91	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-79,226.06	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-96,704.47	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-103,975.35	0.00	0.00	0.00
30	0.13	0.06	0.06	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-37,593.23	0.00	0.00	0.00
<b>Total</b>	1.00	1.96	1.38	0.61	0.00	607,381.00	76,392.70	908,282.72	0.00	0.00	0.00	-2,429,962.97	0.00	0.00	1,592,056.42

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011

### October 2014 Daily Rainfall and Combined Sewer Overflows

October	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Brook	CAM 002 Mass Ave. @ Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River	
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	0.94	0.57	0.84	0.94	0.00	0.00	0.00	0.00	0.00	0.00	-21,711.90	0.00	0.00	0.00
2	0.30	0.36	0.38	0.22	0.00	0.00	0.00	0.00	0.00	0.00	-63,588.28	0.00	0.00	0.00
3	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-81,345.96	0.00	0.00	0.00
4	0.21	0.14	0.20	0.19	0.00	0.00	0.00	0.00	0.00	0.00	-83,052.17	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-47,976.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-4,894.08	0.00	0.00	0.00
8	0.00	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-41,115.85	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-53,251.50	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-54,442.89	0.00	0.00	0.00
11	0.33	0.25	0.28	0.34	0.00	0.00	0.00	0.00	0.00	0.00	-53,828.75	0.00	0.00	0.00
12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-78,108.87	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-77,325.81	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-80,146.27	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-71,560.42	0.00	0.00	0.00
16	0.54	0.47	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	-32,385.78	0.00	0.00	0.00
17	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-39,416.91	0.00	0.00	0.00
18	0.00	0.22	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-74,407.68	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-63,585.17	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-50,859.67	0.00	0.00	0.00
21	0.02	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	-45,792.84	0.00	0.00	0.00
22	0.69	0.55	0.70	0.74	0.00	0.00	0.00	0.00	0.00	0.00	-28,251.51	0.00	0.00	0.00
23	2.57	2.12	1.93	2.16	0.00	1,055,805.00	494,611.80	160,929.32	0.00	0.00	-16,180.75	0.00	0.00	1,711,346.12
24	0.15	0.08	0.07	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-30,879.12	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-46,843.51	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-81,487.36	0.00	0.00	0.00
29	0.05	0.10	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	-52,098.29	0.00	0.00	0.00
30	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-54,598.36	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-81,966.38	0.00	0.00	0.00
<b>Total</b>	<b>5.82</b>	<b>4.97</b>	<b>5.05</b>	<b>5.33</b>	<b>0.00</b>	<b>1,055,805.00</b>	<b>494,611.80</b>	<b>160,929.32</b>	<b>0.00</b>	<b>0.00</b>	<b>-1,511,102.05</b>	<b>0.00</b>	<b>0.00</b>	<b>1,711,346.12</b>

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011

**November 2014 Daily Rainfall and Combined Sewer Overflows**

November	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001 Foch St. @ Alewife Brook	CAM 002 Mass Ave. @ Alewife Brook	CAM 401B Columbus @ Mass Ave. Alewife Brook	CAM 004 Concord Ave @ Rotary Alewife Brook	401A Sherman St. Alewife Brook	CAM 005 Lowell St. @ Mt. Auburn St Charles River	CAM 007 Hawthorne St. @ Memorial Dr. Charles River		CAM 017 Edwin Land Blvd. @ Binney St. Charles River	
	(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
1	0.55	0.47	0.35	0.51	0.00	0.00	0.00	0.00	0.00	0.00	-48,937.38	0.00	0.00	0.00
2	0.33	0.17	0.13	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-11,762.11	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.64	0.46	0.40	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.10	0.07	0.11	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.27	0.26	0.22	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	1.68	1.43	1.63	1.52	0.00	85,512.13	0.00	0.00	0.00	0.00	-449.08	0.00	0.00	85,512.13
18	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1,325.25	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-17,955.64	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.35	0.28	0.36	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	1.69	0.39	0.75	1.53	0.00	0.00	0.00	0.00	0.00	0.00	-13,697.49	0.00	0.00	0.00
27	0.16	0.25	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	-11,483.27	0.00	0.00	0.00
28	0.01	0.03	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	-382,556.63	0.00	0.00	0.00
29	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-410,018.85	0.00	0.00	0.00
30	0.01	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-80,682.18	0.00	0.00	0.00
<b>Total</b>	<b>5.80</b>	<b>4.37</b>	<b>4.07</b>	<b>5.21</b>	<b>0.00</b>	<b>85,512.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-978,867.89</b>	<b>0.00</b>	<b>0.00</b>	<b>85,512.13</b>

Alewife Brook outfall CAM002B is temporarily plugged  
 Charles River outfalls CAM009 and CAM011 are temporarily plugged  
 CAM 400 Permanently closed on March 31, 2011

**December 2014 Daily Rainfall and Combined Sewer Overflows**

December	Rain Gauges				Alewife Brook					Charles River				Total	
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001	CAM 002	CAM 401B	CAM 004	401A	CAM 005	CAM 007		CAM 017		
					Foch St. @ Alewife Brook	Mass Ave. @ Alewife Alewife Brook	Columbus @ Mass Ave. Alewife Brook	Concord Ave @ Rotary Alewife Brook	Sherman St. Alewife Brook	Lowell St. @ Mt. Auburn St Charles River	Hawthorne St. @ Memorial Dr. Charles River		Edwin Land Blvd. @ Binney St. Charles River		
(in)	(in)	(in)	(in)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)		
1	0.00	0.36	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.18	0.13	0.15	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.54	0.45	0.50	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.17	0.10	0.18	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	1.16	1.01	1.08	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.06	0.18	0.09	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	4.62	2.25	1.74	3.89	12,591.44	3,245,751.00	5,101,254.00	63,328,989.82	13,612,159.42	80,952.28	0.00	151,626.46	4,280,960.00	89,814,284.42	
10	0.03	0.17	0.14	0.27	0.00	0.00	21,586.44	855,417.63	0.00	0.00	-2,286.66	0.00	0.00	877,004.07	
11	N/A	0.13	0.09	0.06	708.52	0.00	0.00	0.00	0.00	0.00	-9,682.31	0.00	0.00	708.52	
12	N/A	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-8,482.63	0.00	0.00	0.00	
13	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-12,940.96	0.00	0.00	0.00	
14	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-9,128.99	0.00	0.00	0.00	
15	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-218,579.12	0.00	0.00	0.00	
16	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-391,422.97	0.00	0.00	0.00	
17	N/A	0.36	0.39	0.35	0.00	0.00	0.00	0.00	0.00	0.00	-525,894.93	0.00	0.00	0.00	
18	N/A	0.05	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	N/A	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	N/A	0.22	0.19	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	N/A	0.45	0.22	0.54	0.00	0.00	0.00	0.00	0.00	0.00	-20,119.82	0.00	0.00	0.00	0.00
25	N/A	0.13	0.17	0.18	0.00	0.00	0.00	0.00	0.00	0.00	-13,827.45	0.00	0.00	0.00	0.00
26	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	N/A	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-29,734.82	0.00	0.00	0.00	0.00
29	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	6.76	6.06	5.02	7.31	13,299.96	3,245,751.00	5,122,840.44	64,184,407.45	13,612,159.42	80,952.28	-1,242,100.66	151,626.46	4,280,960.00	90,691,997.01	

Alewife Brook outfall CAM002B is temporarily plugged  
Charles River outfalls CAM009 and CAM011 are temporarily plugged  
CAM 400 Permanently closed on March 31, 2011

Month	Rain Gauges				Alewife Brook					Charles River				Total
	Cambridge DPW Cambridge, MA	Hobbs Brook Waltham, MA	Stony Brook Waltham, MA	Muddy River Brookline, MA	CAM 001	CAM 002	CAM 401B	CAM 004	401A	CAM 005	CAM 007		CAM 017	
	(in)	(in)	(in)	(in)	Foch St. @ Alewife Alewife Brook	Mass Ave. @ Alewife Alewife Brook	Columbus @ Mass Ave. Alewife Brook	Concord Ave @ Rotary Alewife Brook	Sherman St. Alewife Brook	Lowell St. @ Mt. Auburn St Charles River	Hawthorne St. @ Memorial Dr. Charles River		Edwin Land Blvd. @ Binney St. Charles River	
					(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	(GPD)	
January	N/A	2.87	2.61	2.86	0.00	0.00	0.00	0.00	0.00	0.00	-2,081,262.06	0.00	0.00	0.00
February	N/A	4.36	3.91	4.43	0.00	0.00	0.00	0.00	0.00	0.00	-905,886.29	0.00	0.00	0.00
March	N/A	4.62	4.49	3.78	420.87	12,313.74	9,498,830.00	12,929.79	0.00	0.00	-1,569,463.05	0.00	0.00	9,524,494.40
April	3.11	3.93	3.61	3.37	0.00	0.00	0.00	0.00	0.00	0.00	-2,488,165.40	0.00	0.00	0.00
May	2.43	3.25	2.99	2.63	0.00	0.00	0.00	0.00	0.00	0.00	-2,276,941.73	0.00	0.00	0.00
June	2.62	2.49	2.61	1.98	0.00	0.00	0.00	9,798.91	0.00	0.00	-2,219,826.32	0.00	0.00	9,798.91
July	6.20	6.20	6.86	5.51	6,510.90	520,615.90	6,786,935.21	19,560,818.97	8,266,469.98	887,635.60	-2,639,791.28	83,273.27	1,188,980.00	37,301,239.83
August	2.87	3.13	2.74	1.84	0.00	399,019.80	0.00	0.00	0.00	0.00	-2,572,013.16	0.00	0.00	399,019.80
September	1.00	1.96	1.38	0.61	0.00	607,381.00	76,392.70	908,282.72	0.00	0.00	-2,429,962.97	0.00	0.00	1,592,056.42
October	5.82	4.97	5.05	5.33	0.00	1,055,805.00	494,611.80	160,929.32	0.00	0.00	-1,511,102.05	0.00	0.00	1,711,346.12
November	5.80	4.37	4.07	5.21	0.00	85,512.13	0.00	0.00	0.00	0.00	-978,867.89	0.00	0.00	85,512.13
December	6.76	6.06	5.02	7.31	13,299.96	3,245,751.00	5,122,840.44	64,184,407.45	13,612,159.42	80,952.28	-1,242,100.66	151,626.46	4,280,960.00	90,691,997.01
<b>Total</b>	<b>36.61</b>	<b>48.21</b>	<b>45.34</b>	<b>44.86</b>	<b>20,231.73</b>	<b>5,926,398.57</b>	<b>21,979,610.15</b>	<b>84,837,167.16</b>	<b>21,878,629.40</b>	<b>968,587.88</b>	<b>-22,915,382.86</b>	<b>234,899.73</b>	<b>5,469,940.00</b>	<b>141,315,464.62</b>

## **APPENDIX III**



**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act, as amended, 33 U.S.C. §§1251 et seq., and the Massachusetts Clean Waters Act, as amended, Massachusetts General Laws Chapter 21, §§26-53, the

**City of Cambridge  
Department of Public Works  
147 Hampshire Street  
Cambridge, MA 02139**

is authorized to discharge from:

**12 Combined Sewer Overflows (CSOs) listed in Attachments A and B**

to the receiving waters named **Alewife Brook and Charles River**, both Class B waters with CSO variances, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This permit shall become effective on the first day of the calendar month following sixty (60) days after the date of signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

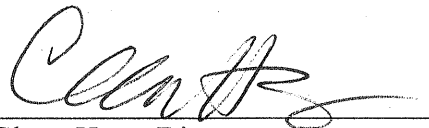
This permit supersedes the permit issued on March 26, 1993.

This permit consists of **8** pages, **Attachments A through E** in Part I, and 25 pages in Part II, Standard Conditions.

Signed this 30<sup>th</sup> day of September, 2009



Lynne Hamjian, Acting Director  
Office of Ecosystem Protection  
Environmental Protection Agency  
Region I  
Boston, MA



Glenn Haas, Director  
Division of Watershed Management  
Department of Environmental Protection  
Commonwealth of Massachusetts  
Boston, MA

**Part I. EFFLUENT LIMITATIONS AND OTHER PERMIT CONDITIONS****A. Effluent Limitations**

1. During wet weather, the permittee is authorized to discharge combined storm water and sanitary wastewater from combined sewer outfalls listed in **Attachments A and B**, subject to the following effluent limitations and requirements:
  - a. The permittee must implement the Nine Minimum Controls (NMC) specified below and detailed further in Parts I.B. and I.C. of this permit by the effective date of the permit.
    - (1) Proper operation and regular maintenance programs for the sewer system and the combined sewer overflows.
    - (2) Maximum use of the collection system for storage.
    - (3) Review and modification of the pretreatment program to assure CSO impacts are minimized.
    - (4) Maximization of flow to the POTW for treatment.
    - (5) Prohibition of dry weather overflows from CSOs.
    - (6) Control of solid and floatable materials in CSOs.
    - (7) Pollution prevention programs that focus on contaminant reduction activities.
    - (8) Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.
    - (9) Monitoring to effectively characterize CSO and the efficacy of CSO controls.
  - b. The authorized typical year discharge (activation) frequencies and volumes for the **Charles River** CSO discharges are limited as shown in **Attachment A**. Discharge frequencies and volumes are expected to vary from year to year as a function of rainfall. CSOs discharging to the Lower Charles River have been granted a variance under the Massachusetts water quality standards (WQS) through October 1, 2010. A copy of this determination letter for the variance extension is included as **Attachment C**. The conditions of this variance are incorporated into and are enforceable elements of this permit.
  - c. The authorized typical year discharge (activation) frequencies and volumes for **Alewife Brook** CSO discharges are limited as shown in **Attachment B**. Discharge frequencies and volumes are expected to vary from year to year as a function of rainfall. CSOs discharging to Alewife Brook have been granted a

variance under the Massachusetts WQS through September 1, 2010. A copy of this determination letter for this variance extension is included as **Attachment D** and the fact sheet accompanying this variance extension is included in the fact sheet as **Attachment B**. The conditions of this variance extension are incorporated into and are enforceable elements of this permit.

- d. The permit's discharges must meet Federal and State WQS subject to and consistent with any water quality standards variances or variance extensions issued by the MassDEP and approved by the EPA.

### **B. Nine Minimum Controls Implementation**

Until the review and update described below is completed, the permittee shall implement the nine minimum controls in accordance with the documentation submitted by the City on December 31, 1996 and its response to EPA comments dated May 1, 1997, except where the minimum implementation levels described in Part I.C are more stringent.

Pursuant to the requirements of Part I.D.5., the permittee must review and update its nine minimum control program no later than April 30<sup>th</sup> of the first year of the permit. The nine minimum controls shall then be implemented in accordance with this documentation, except as updated pursuant to the annual reporting requirements in Part I.D.5.

### **C. Minimum Implementation Levels**

1. Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected, at a minimum of once per month, to insure that it is in good working condition and adjusted to minimize combined sewer discharges and tidal surcharging. (NMC # 1, 2 and 4). The following inspection results shall be recorded: the date and time of the inspection, the general condition of the CSO structure, and whether the structure is operating satisfactorily. If maintenance is necessary, the permittee shall record: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. The permittee shall forward to the Massachusetts Department of Conservation and Recreation ("DCR") its description of any conditions within DCR's control that impair the operation of any CSO structure. The permittee shall maintain all records of inspections for at least eight (8) years.
2. Discharges to the combined system of septage, holding tank wastes or other material which may cause a visible oil sheen or containing floatable materials are prohibited during wet weather when CSO discharges may be active. (NMC# 3, 6, and 7).
3. Dry weather overflows (DWOs) are prohibited (NMC# 5). All dry weather sanitary and/or industrial discharges from CSOs must be reported to EPA and MassDEP within 24 hours in accordance with the reporting requirements for plant bypass (See Part 1.E. Unauthorized Discharges and Part II.D.1.e. of this permit).

4. The permittee shall quantify and record all discharges from combined sewer outfalls (NMC# 9). Quantification may be through direct measurement or estimation. When estimating, the permittee shall make reasonable efforts (i.e. gaging, measurements) to verify the validity of the estimation technique. The following information must be recorded for each combined sewer outfall for each discharge event:
- Estimated duration (hours) of discharge;
  - Estimated volume (gallons) of discharge; and
  - National Weather Service precipitation data from the nearest gage where precipitation is available at daily (24-hour) intervals and the nearest gage where precipitation data at minimum of one-hour intervals is available to the permittee. Cumulative precipitation per discharge event shall be provided;

The permittee shall maintain all records of discharges for at least eight (8) years after the expiration date of this permit.

5. The permittee shall maintain identification signs for all combined sewer outfall structures (NMC# 8). The signs shall be located at or near the combined sewer outfall structures and be readable by the public both from the shore and from instream locations. These signs shall be a minimum of 12 x 18 inches in size, with white lettering against a green background, and shall contain the following language, at a minimum:

**WARNING:\***  
**CITY OF CAMBRIDGE**  
**DEPARTMENT OF PUBLIC WORKS**  
**WET WEATHER SEWAGE DISCHARGE OUTFALL (discharge serial number)**

\* For existing signs which otherwise meet all of the requirements of this section, the word "Warning" need not be added.

Where easements over property not owned by the permittee must be obtained to meet this requirement, the permittee shall identify the appropriate landowners and obtain the necessary easements, to the extent practicable.

The permittee, to the extent practicable, shall add a universal symbol to their warning signs reflecting a CSO discharge, or place additional signs in languages other than English based on notification from the EPA and the MassDEP or on the permittee's own determination that the primary language of a substantial percentage of the residents in the vicinity of a given outfall structure is not English.

6. The permittee, with the collaboration of the MWRA and the City of Somerville, shall maintain informational signs at John Wald Park and other public access locations identified by the MassDEP, including the Community Sailing Program and local boathouses, to advise the public of CSO discharges and potential public health impacts

and to provide contact information and website links. The text of the notice shall be subject to prior approval by the MassDEP. (NMC# 8)

7. The permittee, with the collaboration of the MWRA and the City of Somerville, shall issue a joint press release by April 15 of each year, which shall include (a) general information on CSOs, (b) their locations in the Alewife Brook/Upper Mystic River watershed, and (c) potential health risks posed by exposure to CSO discharges. This press release shall be distributed to the following, at a minimum: (NMC# 8)
  - watershed advocacy groups
  - local health agents
  - property owners subject to flooding in the Alewife Brook watershed {as defined by the MassDEP in consultation with the U. S. Federal Emergency Management Agency (FEMA) and the DCR}}
  - newspapers of local circulation in the Alewife Brook/Upper Mystic River watershed
8. The permittee, in collaboration with MWRA and the City of Somerville, shall provide email notice to EPA, MassDEP, local health agents, and the Mystic River Watershed Association of CSO discharge events in the Alewife Brook watershed within 24 hours of the onset of such discharges. The permittee may use the activation of outfall CAM401B as a general indicator of the onset of CSO discharge which would trigger the 24 hour notice, unless there is evidence that a different CSO activated before CAM401B. (NMC# 8)
9. The permittee shall update its website to include general information regarding CSOs, including their potential health impacts, locations of CSO discharges in the Charles River and Alewife Brook watersheds, the overall status of all CSO abatement programs, web links to CSO communities and watershed advocacy groups, and the most recent information on all CSO activations and volumes in both watersheds. (NMC# 8)

#### **D. Annual Report**

**By April 30th of each year** the permittee shall submit a report which includes the following information;

1. Activation frequencies and discharge volumes for each CSO listed on **Attachments A and B** during the previous calendar year. In the first annual report submitted in accordance with this permit, the permittee will include a CSO monitoring plan that describes the methods it will use to quantify CSO activations and volumes. Activation frequencies and discharge volumes shall thereafter be reported in accordance with the methods identified in the CSO monitoring plan.
2. Precipitation during the previous year for each day, including total rainfall, peak intensity, and average intensity.

3. Status of the implementation of CSO abatement work for which the permittee is directly responsible in accordance with the MWRA Final CSO Facilities Plan, the Federal Court Order (US v. MDC., et al., No. 85-0489 (D. Mass.)), as amended by the Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflow Control (as incorporated into the Federal Court Order on April 27, 2006), and any related, subsequent documents. The “Second Stipulation” document is included as **Attachment E**.
4. For outfalls listed in **Attachments A and B**, provide the following information in the Annual Report for year 3 and every two years thereafter using the updated MWRA model (or equivalent) for comparison:
  - a. A comparison between the precipitation for the previous year and the precipitation in the typical year under future planned conditions used in the MWRA Final CSO Facilities Plan or “Notice of Project Change” document, or subsequent document, whichever is appropriate. This comparison shall include the number of events and size of events (including recurrence interval).
  - b. For each CSO, a comparison between the activation volume and frequency for the previous year and the volume and frequency expected during a typical year under future planned conditions.
  - c. An evaluation of whether the CSO activation volumes and frequencies for the previous year are in accordance with the estimates in the MWRA Final CSO Facilities Plan or the report entitled “Notice of Project Change for the Long Term CSO Control Plan for Alewife Brook” (April 30, 2001, MWRA), given the precipitation which occurred during the year, and the CSO abatement activities which have been implemented. Where CSO discharges are determined to be greater than the activation frequency or volume in either document above, the permittee shall include their assessment of such result, a discussion of remaining CSO abatement activities and an assessment of the impact of those projects on attaining the level of CSO control identified in the relevant document, or any amendments thereto.
5. A summary of modifications to the approved NMC program which have been evaluated and a description of those which will be implemented during the upcoming year. In the first annual report submitted in accordance with this permit (April 30, 2010), the permittee shall submit an updated nine minimum control plan that reviews the current controls and updates them to enhance their effectiveness. The updated NMC plan shall include or exceed all of the minimum implementation levels described in Part I.C. The second Annual NMC Report (due April 30, 2011) shall include 1) an assessment of the potential for inflow from Alewife Brook to the enter the combined sewer system through the existing regulator structures over a range of flood conditions and corresponding Brook levels, and 2) an assessment of the cost, feasibility, and effectiveness of installing inflow controls on the remaining CSO outfalls if flow does enter the combined sewer system more frequently than the 100 year storm.

6. A certification that states that the previous calendar year's monthly inspections were conducted, their results recorded, and records maintained.

#### **E. Unauthorized Discharges**

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit from those outfalls listed in **Attachments A and B** of this permit. Discharges of wastewater from CSOs during dry weather or from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported to EPA and MassDEP in accordance with Section D.1.e.(1) of the General Requirements of this permit (Twenty-four hour reporting). [Note: SSO Reporting Form (which includes MassDEP Regional Office telephone numbers) for submittal of written report to MassDEP is available on-line at: <http://www.mass.gov/dep/water/approvals/surffms.htm#sso>.]

#### **F. Notice of Elimination**

The permittee shall give notice of elimination or change in status of any outfall listed in **Attachments A and B** as soon as possible and in writing to the Director of the Office of Ecosystem Protection at EPA and to the Director of the Division of Watershed Management at MassDEP.

#### **G. Certification and Signature of Reports**

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with section D.2. of Part II of this permit.

#### **H. Report Submission**

1. Signed and dated originals of all notifications and reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, MA 02114

2. Signed copies of all notifications and reports shall be submitted to the State at:

Massachusetts Department of Environmental Protection  
Bureau of Resource Protection  
205B Lowell Street  
Wilmington, MA 01887

Massachusetts Department of Environmental Protection  
Bureau of Resource Protection  
1 Winter Street  
Boston, MA 02108  
Attention: Mark Casella

Massachusetts Department of Environmental Protection  
Division of Watershed Management  
Surface Water Discharge Permit Program  
627 Main Street, 2nd Floor  
Worcester, Massachusetts 01608

### **I. Retention of Records**

The permittee shall retain all records of all monitoring information, copies of all reports required by this permit and records of all other data required by or used to demonstrate compliance with this permit, for at least eight years. This period may be modified by alternative provisions of this permit or extended by request of the Director at any time.

### **J. State Permit Conditions**

This discharge permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chapter 21, §43.

Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.



**ATTACHMENT A**

**CSO OUTFALLS AND EFFLUENT LIMITS – CHARLES RIVER**

Receiving Water	Outfall Number	Discharge Location	Effluent Limitations	
			Annual Activation Frequency	Annual Volume (million gallons)
Charles River <sup>1</sup>	CAM-005	Lowell Street at Mount Auburn	3	0.84
	CAM-007	Memorial Drive at Hawthorne Street	1	0.03
	CAM-009	Memorial Drive at Old Murray Road	2 <sup>2</sup>	0.01
	CAM-011	Plympton Street	0 <sup>2</sup>	0
	CAM-017	Binney Street at Edwin Land Boulevard	1	0.45

1. These discharges shall be consistent with the performance of the Long Term Control Plan (LTCP), as defined in Exhibit B of the Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflow Control as incorporated into the Federal Court Order on April 27, 2006.
2. Outfalls CAM009 and CAM011 have been temporarily sealed. They may be reopened during the permit term depending upon the results of the monitoring of hydraulic effects which are experienced upstream.

**ATTACHMENT B**

**CSO OUTFALLS AND EFFLUENT LIMITS – ALEWIFE BROOK**

Receiving Water	Outfall Number	Discharge Location	Effluent Limitations	
			Annual Activation Frequency	Annual Volume (million gallons)
Alewife Brook <sup>1</sup>	CAM-001	Foch Street at Alewife Brook Parkway	5	0.19
	CAM-002A <sup>2</sup> CAM002B <sup>2</sup>	Alewife Brook Parkway at Massachusetts Avenue	4	0.69
	CAM-004	Concord Avenue Rotary	0 <sup>3</sup>	0
	CAM-400	Alewife Brook at Harrison Avenue Extension	0 <sup>3</sup>	0
	CAM-401A	Sherman Street and Alewife Brook at B&M Railroad	5	1.61
	CAM-401B	Alewife Brook Parkway at Massachusetts Avenue	7	2.15

1. These discharges shall be limited in accordance with the performance of the Revised Recommended Plan, as characterized in the “Final Variance Report for Alewife Brook and the Upper Mystic River”, July, 2003, MWRA and supplemental letter report (Metcalf & Eddy, Inc.), July 8, 2003.
2. These two CSOs are at the same location and are associated with a single CSO regulator.
3. These CSO are scheduled to be closed.

Note : CSO outfalls MWR003 and SOM001A, both located in Cambridge, are maintained by the MWRA and the City of Somerville respectively and are authorized by NPDES permits MA0103284 and MA0101982. Two CSO treatment facilities, at Cottage Farm and Prison Point, also located in Cambridge, are operated by the MWRA and authorized by permit #MA0103284.

## ATTACHMENT C



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

IAN A. BOWLES  
Secretary

ARLEEN O'DONNELL  
Commissioner

### FINAL DETERMINATION TO EXTEND VARIANCE FOR COMBINED SEWER OVERFLOW DISCHARGES TO ALEWIFE BROOK/UPPER MYSTIC RIVER

The Department of Environmental Protection (the "Department") hereby extends the Variance for CSO Discharges to the Alewife Brook/Upper Mystic River from September 1, 2007 for a period of three years (to September 1, 2010). This action, which authorizes limited CSO discharges, is taken in connection with NPDES permit Nos. MA0103284, MA0101974, and MA0101982, issued to the Massachusetts Water Resources Authority (MWRA), the City of Somerville, and the City of Cambridge, respectively. The Variance extension is issued pursuant to the Massachusetts Surface Water Quality Standards at 314 CMR 4.00, and subject to the specific conditions which follow. The Variance is intended to provide a timeframe to implement the revised recommended CSO control plan for the Alewife Brook/Upper Mystic River watersheds.

The Department grants this Variance based on the technical and cost information in the 1997 MWRA CSO Facilities Plan, the July 1, 2003 MWRA Final Variance Report, and affordability analyses demonstrating that implementation of more stringent CSO controls at this time would result in substantial and widespread social and economic impact as specified in 314 CMR 4.03(4). Issuance of this Variance for CSO discharges to the Alewife Brook/Upper Mystic River is consistent with EPA Guidance: *Coordinating CSO Long-Term Planning with Water Quality Standard Reviews (July 31, 2001)*, which states that longer term variances and renewal of variances are warranted given the extended duration necessary for implementation of Long-Term Control Plan(s).

MWRA and the Cities of Cambridge and Somerville shall implement the revised recommended plan included in the July 1, 2003 MWRA Final Variance Report for the Alewife Brook/Upper Mystic River. The implementation schedule will be as set forth in modifications to the Federal Court Order.

It is anticipated that this Variance will be incorporated into NPDES permits for the MWRA and the Cities of Cambridge and Somerville. Failure by the MWRA and/or the Cities of Cambridge or Somerville to comply with the conditions of this Variance following its effective date and prior to and following permit modification or reissuance will constitute a violation of

the permit as in effect on the date of such violation, as well as the Massachusetts Surface Water Quality Standards and Permit Regulations, 314 CMR 3.00.

## VARIANCE CONDITIONS

The CSO Variance is conditioned upon MWRA and the Cities of Cambridge and Somerville complying with the following requirements:

### A. Implementation of the Revised Recommended Plan

MWRA and the Cities of Cambridge and Somerville shall implement the \$100 million Revised Recommended Plan in the Alewife Brook/Upper Mystic River watershed to abate CSO discharges. The implementation schedule shall conform to the requirements of the federal court order, as modified. CSO discharges shall be limited in accordance with the performance of the Revised Recommended Plan, as characterized in the July 1, 2003 MWRA Final Variance Report after implementation of the Revised Recommended Plan and upon completion of subsequent monitoring to verify that the Long-Term CSO control goals are achieved.

### B. Other Actions to Minimize CSO/Sanitary Discharges

- i. MWRA and the Cities of Cambridge and Somerville shall continue to implement the Nine Minimum Controls (NMC), and monitor CSO activations and volumes. Cambridge and Somerville each shall submit a report to the Department on an annual basis that contains estimates of CSO activations and volumes in the Alewife Brook/Upper Mystic River. The first report shall be submitted by April 30, 2008 for the preceding calendar year. On or before April 30 of each year, MWRA shall submit to the Department the estimated CSO activations and volumes for all CSO outfalls for the previous calendar year in the Alewife Brook/Upper Mystic River using the MWRA sewer system model.
- ii. MWRA shall continue to provide technical assistance related to the identification and removal of I/I to member communities.
- iii. The Cities of Cambridge and Somerville shall respond to any DEP comments on the Infrastructure Studies submitted pursuant to the 2004 Variance Extension, or any other DEP information requests to clarify the conditions of the combined sewer system, including the frequency and volume of CSO discharges, within 90 days of receiving such comments.

### C. Notification to the Public of CSO Discharges and Impacts:

- i. MWRA and the cities of Cambridge and Somerville shall maintain outfall signs which are visible both from the shore and from in stream locations for their permitted

CSO discharges. Pursuant to the NPDES permit, the following language, at a minimum, shall be included:

WARNING:  
WET WEATHER  
SEWAGE DISCHARGE  
OUTFALL (discharge serial number)

- ii. MWRA and the Cities of Cambridge and Somerville shall maintain informational signs at John Wald Park and other public access locations identified by the Department to advise the public of CSO discharges and potential public health impacts and to provide contact information and website links. The text of the notice shall be subject to prior approval by the Department.
- iii. MWRA and the Cities of Cambridge and Somerville shall issue a joint press release by April 15 of each year to watershed advocacy groups, local health agents, property owners subject to flooding in the Alewife Brook watershed (as defined by the Department in consultation with FEMA and DCR), and newspapers of local circulation in the Alewife Brook/Upper Mystic River watershed, which shall include general information on CSOs, their locations in the Alewife Brook/Upper Mystic River watershed, and potential health risks posed by exposure to CSO events.
- iv. The City of Cambridge, in collaboration with MWRA and Somerville, shall provide email notice to EPA, the Department, local health agents, and the Mystic River Watershed Association of CSO discharge events in the Alewife Brook watershed within 24 hours of the onset of the discharge.
- v. MWRA and Cities of Cambridge and Somerville shall update and maintain their respective websites to include general information regarding CSOs, potential health impacts, locations of CSO discharges, the status of the CSO abatement program, web links to CSO communities and watershed advocacy groups, and information from the most recent information on CSO activations and volumes in the Alewife Brook/Upper Mystic River watershed.

#### D. Receiving Water Monitoring

The MWRA shall continue to perform water quality monitoring in the Alewife Brook/Upper Mystic River to assess the impacts of CSO discharges.

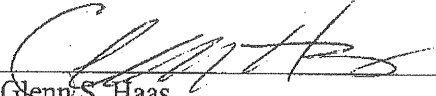
Each year, on or before July 15 for the duration of this Variance, MWRA shall submit to the Department and EPA a report on the previous year's sampling program. The report shall include:

- i. A summary of the receiving water sampling data collected over the past calendar year, including sampling locations and parameters, and comparisons between results during wet and dry weather.

- ii. MWRA has a sampling plan for the Alewife Brook/Upper Mystic River on its website at <http://www.mwra.state.ma.us/harbor/enquad/pdf/2005-12.pdf>. Changes in schedule, sampling sites, and/or parameters will be provided to the Department for review and approval in advance of implementation of the sampling plan, for each year of this variance.

Subject to the conditions included in this Variance, MWRA, and the Cities of Cambridge and Somerville shall be authorized to have CSO discharges during wet weather events to the Alewife Brook/Upper Mystic River, CSO discharges shall be consistent with the performance of the Revised Recommended Plan, as characterized in the July 1, 2003 MWRA Final Variance Report, upon implementation of the Revised Recommended Plan and after completion of subsequent monitoring to verify that the Long-Term CSO control goals are achieved.

8/30/07  
Date Issued

  
Glenn S. Haas

Acting Assistant Commissioner  
Bureau of Resource Protection

9/1/07  
Effective Date

## ATTACHMENT D



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

IAN A. BOWLES  
Secretary

ARLEEN O'DONNELL  
Commissioner

### FINAL DETERMINATION TO EXTEND VARIANCE FOR COMBINED SEWER OVERFLOW DISCHARGES TO LOWER CHARLES RIVER/CHARLES BASIN

The Department of Environmental Protection (the "Department") hereby extends the Variance for CSO Discharges to the Lower Charles River/Charles Basin from October 1, 2007 for a period not to exceed three years (to October 1, 2010). This action, which authorizes limited CSO discharges, is taken in connection with NPDES permit Nos. MA0103284, MA0101982, and MA 0101192 issued to the Massachusetts Water Resources Authority ("MWRA"), the City of Cambridge, and the Boston Water & Sewer Commission, respectively. This Variance extension is issued pursuant to the Massachusetts Surface Water Quality Standards at 314 CMR 4.00, and subject to the specific conditions, which follow. This Variance is intended to provide for the completion of design, construction, and subsequent monitoring of CSO controls proposed in the revised Long-Term Control Plan (the "LTCP") mandated in the relevant orders of the United States District Court for the District of Massachusetts, Civil Action Nos. 85-0489-MA and 83-1614-MA, including amended Schedule Six, dated April 27, 2006 (the "Federal Court Order").<sup>1</sup>

Based on a review of the extensive planning documents and reports conducted by the MWRA, the City of Cambridge, and the Boston Water and Sewer Commission and moreover based upon the status of the implementation of the LTCP, the Department has determined that it is not feasible at this time for the MWRA, the City of Cambridge, and the Boston Water & Sewer Commission to fully attain the Class B uses and associated water quality criteria for bacteria for the Lower Charles River/Charles Basin as implementation of more stringent controls at this time beyond those included in the LTCP would result in substantial and widespread economic and social impact.

Issuance of this Variance for CSO discharges to the Lower Charles River/Charles Basin is consistent with EPA Guidance: *Coordinating CSO Long-Term Planning with Water Quality Standard Reviews (July 31, 2001)*, which states that longer term variances and renewal of

<sup>1</sup> The documents that comprise MWRA's LTCP are identified in the Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflow Control dated March 15, 2006.

variances are warranted given the extended duration necessary for implementation of the Long Term CSO Control Plan.

The components of the LTCP for the Lower Charles River/Charles Basin include the recommendations of the *January 2004, Cottage Farm CSO Facility Assessment Report*, with additional wastewater improvements which will further reduce CSO activations and volume at the Cottage Farm facility. Additionally, an abandoned 54-inch sewer crossing beneath the Charles River will be activated in order to convey flow to the Ward Street Headworks and the Deer Island Wastewater Treatment Plant. System optimization, outfall closures, and separation in Brookline and the Bulfinch Triangle area of Boston are also elements of the LTCP's proposed improvements for the Lower Charles River/Charles Basin.

MWRA, in cooperation with the City of Cambridge, and the Boston Water & Sewer Commission, shall implement the LTCP. The Department notes that portions of the work included in the LTCP, specifically the sewer separation work in Boston, Cambridge and Brookline are critical to achieving a high level of CSO control in the Charles River watershed, and at the same time addressing public health risks associated with sewer backups and flooding.

It is anticipated that this Variance will be incorporated into the NPDES permits for the MWRA, the City of Cambridge, and the Boston Water & Sewer Commission. Failure by the MWRA, the City of Cambridge, or the Boston Water & Sewer Commission to comply with the conditions of this Variance following its effective date and prior to or following permit modification or re-issuance will constitute a violation of the permit as in effect on the date of such violation, as well as the Massachusetts Surface Water Quality Standards and Permit Regulations, 314 CMR 3.00.

In consideration of the following conditions, the Department has determined that the extension of the Variance to the Massachusetts Water Resources Authority ("MWRA"), the City of Cambridge, and the Boston Water & Sewer Commission for their CSO discharges to the Lower Charles River/Charles Basin are warranted so that based on information collected and analyses performed in conjunction with the implementation of the LTCP, it ultimately can be determined whether the Class B uses for the Lower Charles River/Charles Basin can be attained.

## **VARIANCE CONDITIONS**

The CSO Variance is conditioned upon MWRA, the City of Cambridge, and the Boston Water & Sewer Commission complying with the following requirements:

### A. Implementation of the LTCP

MWRA, the City of Cambridge, and the Boston Water & Sewer Commission shall implement the LTCP for the Lower Charles River/Charles Basin, specified in the 1997 MWRA Final Environmental Impact Report and CSO Facilities Plan and modified by the recommendations for additional work included in the January, 2004 Cottage Farm CSO Facility Assessment Report; the August 2, 2005 Recommendations and Proposed Schedule for Long-Term CSO Control for the Charles River, Alewife Brook, and East Boston; and other planning documents specified in the Federal Court Order. The implementation



schedule for the proposed work shall conform to the requirements of the Federal Court Order, as modified. CSO discharges shall be consistent with the performance of the LTCP, as defined in Exhibit B of the Second CSO Stipulation incorporated into the Federal Court Order on April 27, 2006.

B. Other Actions to Minimize CSO/Sanitary Discharges

- i. MWRA, the City of Cambridge, and the Boston Water & Sewer Commission shall continue to implement the Nine Minimum Controls (“NMC”), and monitor CSO activations and volumes. The City of Cambridge and the Boston Water & Sewer Commission each shall submit a report to the Department on an annual basis, beginning on April 30, 2008, presenting estimated CSO activations and volumes in the Lower Charles River/Charles Basin for the previous calendar year. On or before April 30 of each year, MWRA shall submit to the Department estimated CSO activations and volumes for all CSO outfalls for the previous calendar year in the Lower Charles River/Charles Basin, using the MWRA sewer system model.
- ii. MWRA shall continue to provide technical assistance related to the identification and removal of I/I to member communities.
- iii. The City of Cambridge and the Boston Water & Sewer Commission shall respond to any DEP comments on the Infrastructure Studies submitted pursuant to the 2004 Variance Extension, or any other DEP information requests to clarify the conditions of the combined sewer system, including the frequency and volume of CSO discharges, within 90 days of receiving such comments.

C. Notification to the Public of CSO Discharges and Impacts:

- i. MWRA, the City of Cambridge, and the Boston Water & Sewer Commission shall maintain outfall signs for each permitted CSO outfall which are visible both from the shore and from instream locations for their permitted CSO discharges. Pursuant to the NPDES permits, the following language, at a minimum, shall be included:

WARNING:  
WET WEATHER  
SEWAGE DISCHARGE  
OUTFALL (discharge serial number)

- ii. MWRA, the City of Cambridge, and the Boston Water & Sewer Commission shall collaborate to provide informational notices to boathouses in the areas affected by the CSO discharges and the Community Sailing program to advise the public of CSO discharges and potential public health impacts and to provide contact information and website links. The text of the notice shall be subject to prior approval by the Department.
- iii. Between March 1 and December 1 of each year, the MWRA shall provide email notice to EPA, the Department, local health agents in the communities affected by the

CSO discharges, and the Charles River Watershed Association of CSO discharge events at Cottage Farm within 24 hours of the discharge.

- iv. MWRA, the City of Cambridge, and the Boston Water & Sewer Commission shall maintain their respective websites to include general information regarding CSOs, including potential public health impacts, locations of CSO discharges in the Charles River watershed, tables listing CSO activations and volumes identified pursuant to the reporting requirements included in Section B(i), and the overall status of the CSO abatement program.

D. Receiving Water Monitoring

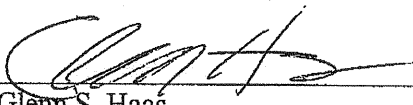
The MWRA shall continue to perform water quality monitoring in the Lower Charles River/Charles Basin to assess the impacts of CSO discharges.

Each year, on or before July 15 for the duration of this Variance, MWRA shall submit to the Department and EPA a report on the previous year's sampling program. The report shall include:

- i. A summary of the receiving water sampling data collected over the past calendar year, including sampling locations and parameters and comparisons between results in wet and dry weather.
- ii. MWRA has a sampling plan for the Charles River on its website at <http://www.mwra.state.ma.us/harbor/enquad/pdf/2005-13.pdf>. Changes in schedule, sampling sites, parameters will be provided to the Department for review and approval in advance of the implementation of the sampling plan for each year of the variance.

Subject to the conditions included in this Variance, MWRA, and the City of Cambridge and Boston Water and Sewer, shall be authorized to have CSO discharges during wet weather events to the Charles River. CSO discharges shall be consistent with the performance of the Revised Recommended LTCP after implementation of the Revised Recommended Plan and upon completion of subsequent monitoring to verify that the Long-Term CSO control goals are achieved.

8/30/07  
Date Issued

  
Glenn S. Haas  
Acting Assistant Commissioner  
Bureau of Resource Protection

10/1/07  
Effective Date

ATTACHMENT E

UNITED STATES DISTRICT COURT  
for the  
DISTRICT OF MASSACHUSETTS

.....  
UNITED STATES OF AMERICA,

Plaintiff,

v.

METROPOLITAN DISTRICT COMMISSION,  
et al.,

Defendants.

CIVIL ACTION  
No. 85-0489-RGS

.....  
CONSERVATION LAW FOUNDATION OF  
NEW ENGLAND, INC.,

Plaintiff,

v.

METROPOLITAN DISTRICT COMMISSION,

Defendants.

CIVIL ACTION  
No. 83-1614-RGS

.....  
SECOND STIPULATION OF THE UNITED STATES  
AND THE MASSACHUSETTS WATER RESOURCES AUTHORITY  
ON RESPONSIBILITY AND LEGAL LIABILITY FOR  
COMBINED SEWER OVERFLOW CONTROL

The Massachusetts Water Resources Authority ("Authority") and the  
United States, on behalf of the Environmental Protection Agency ("EPA"),  
hereby agree and stipulate as follows:

1. The purpose of this Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflow Control ("Second Stipulation") is to terminate the February 27, 1987, Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflows (the "1987 Stipulation") and replace it with this Second Stipulation that reflects developments and progress in the control of combined sewer overflow ("CSO") discharges to Boston Harbor and its tributaries that have taken place since 1987. The 1987 Stipulation shall remain in effect until this Second Stipulation goes into effect. This Second Stipulation shall take effect, and the 1987 Stipulation shall terminate, upon approval by the Court in the above-captioned action of the Joint Motion of the United States and the Massachusetts Water Resources Authority To Amend Schedule Six with Respect to The Charles River, Alewife Brook and East Boston.

2. The Authority's Long-Term Combined Sewer Overflow ("CSO") Control Plan ("LTCP") presently consists of the Authority's July 31, 1997, Final Combined Sewer Overflow Facilities Plan and Environmental Impact Report (the "1997 Facilities Plan"), as modified by the planning documents identified in the attached Exhibit "A," entitled, MWRA Long-Term CSO Control Plan Facilities Planning Documentation.

3. The CSO outfalls that are the subject of the Authority's LTCP include the outfalls listed in Exhibit "B" hereto, entitled, "Summary of Typical

Year CSO Activation Frequency and Volume.” The CSO outfalls identified with the prefix “MWR” are owned or operated by the Authority. The CSO outfalls identified with a prefix “BOS,” “CAM,” “CHE,” or “SOM,” are owned and operated by member municipalities (Boston, Cambridge, Chelsea, or Somerville, respectively), except that the Union Park Pump Station (“UPPS”) is jointly operated by the Authority and the City of Boston.

4. With respect to all of the CSO outfalls within or hydraulically connected to the Authority’s sewer system, including the outfalls identified in Exhibit “B” hereto, the Authority accepts legal liability to undertake such corrective action as may be necessary to implement the CSO control requirements set forth in Schedule Six and related orders of the Court in the above-captioned action, and to meet the levels of CSO control (including as to frequency of CSO activation and as to volume of CSO discharge) described in the Authority’s Long-Term CSO Control Plan. Whether the Authority has met the levels of CSO control in its Long-Term CSO Control Plan shall be determined by the EPA and the Massachusetts Department of Environmental Protection. With respect to all CSO outfalls owned or operated by the Authority, including the CSO outfalls identified in Exhibit “B” identified with the prefix “MWR,” and including the Union Park Pump Station, the Authority also accepts legal liability to undertake such future corrective action as may be necessary to meet the CSO control requirements of the Clean Water Act, 33 U.S.C. § 1251 et seq. The Authority does not accept liability for alleged past

violations of the CSO provisions of NPDES Permit No. MA0102351 (issued in 1976 and transferred to the Authority in 1985) prior to February 27, 1987.

5. This stipulation is not intended to and does not limit the Court's power to find, or any party's right to seek, liability for past or continuing violations of federal law or to enforce compliance with that law.

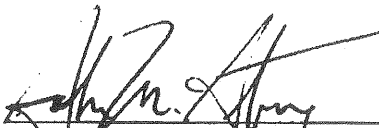
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Authority

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Dated: March 15, 2006

B3131253.1



**Exhibit A  
to Second Stipulation**

**MWRA Long-Term CSO Control Plan Facilities Planning Documentation**

<b>Planning Document</b>	<b>Project</b>	<b>Receiving Water</b>
Re-Assessing Long Term Floatables Control for Outfalls MWR018, 019 and 020, February 2001  Report on Re-Assessment of CSO Activation Frequency and Volume for Outfall MWR010, April 2001, and supplemental letter report (Metcalf & Eddy, Inc.), May 31, 2001	Regionwide Floatables Controls and Outfall Closing Projects	Regionwide
Final Variance Report for Alewife Brook and the Upper Mystic River, July 2003, and supplemental letter report (Metcalf & Eddy, Inc.), July 8, 2003	Sewer Separation at CAM004 and CAM400 Interceptor Connection Relief and Floatables Control at CAM002, CAM401B and SOM01A, and Floatables Control at CAM001 and CAM401A Control Gate/Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief	Alewife Brook
East Boston Branch Sewer Relief Project Reevaluation Report, February 2004  Recommendations and Proposed Schedule for Long-Term CSO Control for the Charles River, Alewife Brook and East Boston, August 2, 2005	Interceptor Relief For BOS003-014	Mystic/Chelsea Confluence; Upper and Lower Inner Harbor
Supplemental Facilities Plan and Environmental Impact Report on the Long-term CSO Control Plan for North Dorchester Bay and Reserved Channel, April 27, 2004	North Dorchester Bay Storage Tunnel and Related Facilities	North Dorchester Bay
	Pleasure Bay Storm Drain Improvements	
	Morrissey Boulevard Storm Drain	
	Reserved Channel Sewer Separation	Reserved Channel
Recommendations and Proposed Schedule for Long-Term CSO Control for the Charles River, Alewife Brook and East Boston, August 2, 2005, and MWRA Revised Recommended CSO Control Plan for the Charles River, Typical Year CSO Discharge Activations and Volumes, November 15, 2005	Brookline Connection, Cottage Farm Overflow Chamber Interconnection and Cottage Farm Gate Control	Upper and Lower Charles River Basin
	Brookline Sewer Separation	
	Bulfinch Triangle Sewer Separation	
	Charles River Valley/South Charles Relief Sewer Gate Controls	
	Evaluation of Additional Charles River Interceptor Interconnection Alternatives	

4/25/2008 -- Revised

2 of 3



**Exhibit A  
to Second Stipulation**

**MWRA Long-Term CSO Control Plan Facilities Planning Documentation**

Prison Point Optimization Study, March 30, 2007	Prison Point CSO Facility Optimization	Upper Inner Harbor
Proposed Modification of Long-Term Level of Control for the Prison Point CSO Facility, April 2008		

<sup>(1)</sup> Also "MWRA Long-Term CSO Control Plan Target CSO Activation Frequency and Volume by Outfall," letter dated December 9, 2005.

**Exhibit B  
to Second Stipulation**

**SUMMARY OF TYPICAL YEAR CSO ACTIVATION FREQUENCY AND VOLUME**

OUTFALL	TYPICAL YEAR		REFERENCE (*)
	LONG TERM CONTROL PLAN 2005 (*)		
	Activation Frequency	Volume (MG)	
<b>ALEWIFE BROOK<sup>(1)</sup></b>			
CAM001	5	0.19	5
CAM002	4	0.69	5
MWR003	5	0.98	5
CAM004	To be closed	N/A	5
CAM400	To be closed	N/A	5
CAM401A	5	1.61	5
CAM401B	7	2.15	5
SOM001A	3	1.67	5
SOM001	Closed	N/A	
SOM002A	Closed	N/A	
SOM003	Closed	N/A	
SOM004	Closed	N/A	
<b>TOTAL</b>		<b>7.29</b>	
<b>UPPER MYSTIC RIVER</b>			
SOM007A/MWR205A (Somerville Marginal)	3	3.48	
SOM007	Closed	N/A	
<b>TOTAL</b>		<b>3.48</b>	
<b>MYSTIC / CHELSEA CONFLUENCE</b>			
MWR205 (Somerville Marginal)	39	60.58	
BOS013	4	0.54	6
BOS014	0	0.00	6
BOS015	Closed	N/A	6
BOS017	1	0.02	9
CHE002	4	0.22	
CHE003	3	0.04	
CHE004	3	0.32	
CHE008	0	0.00	
<b>TOTAL</b>		<b>61.72</b>	
<b>UPPER INNER HARBOR</b>			
BOS009	5	0.59	6
BOS010	4	0.72	6
BOS012	5	0.72	6
BOS019	2	0.58	
BOS050	Closed	N/A	
BOS052	Closed	N/A	
BOS057	1	0.43	
BOS058	Closed	N/A	
BOS060	0	0.00	
MWR203 (Prison Point)	17	243.00	10
<b>TOTAL</b>		<b>246.04</b>	
<b>LOWER INNER HARBOR</b>			
BOS003	4	2.87	6
BOS004	5	1.84	6
BOS005	1	0.01	6
BOS006	4	0.24	6
BOS007	6	1.05	6
<b>TOTAL</b>		<b>6.01</b>	

**Exhibit B  
to Second Stipulation**

**SUMMARY OF TYPICAL YEAR CSO ACTIVATION FREQUENCY AND VOLUME**

OUTFALL	TYPICAL YEAR		REFERENCE <sup>(*)</sup>
	LONG TERM CONTROL PLAN 2005 <sup>(*)</sup>		
	Activation Frequency	Volume (MG)	
<b>CONSTITUTION BEACH</b>			
MWR207	Closed	N/A	
<b>TOTAL</b>		<b>0.00</b>	
<b>FORT POINT CHANNEL</b>			
BOS062	1	0.01	
BOS064	0	0.00	
BOS065	1	0.06	
BOS068	0	0.00	
BOS070			
BOS070/DBC	3	2.19	3
UPPS	17	71.37	
BOS070/RCC	2	0.26	
BOS072	0	0.00	4
BOS073	0	0.00	4
<b>TOTAL</b>		<b>73.89</b>	
<b>RESERVED CHANNEL</b>			
BOS076	3	0.91	7
BOS078	3	0.28	7
BOS079	1	0.04	7
BOS080	3	0.25	7
<b>TOTAL</b>		<b>1.48</b>	
<b>NORTHERN DORCHESTER BAY</b>			
BOS081	0 / 25 year	N/A	
BOS082	0 / 25 year	N/A	
BOS083	0 / 25 year	N/A	
BOS084	0 / 25 year	N/A	
BOS085	0 / 25 year	N/A	
BOS086	0 / 25 year	N/A	
BOS087	0 / 25 year	N/A	
<b>TOTAL</b>		<b>0.00</b>	
<b>SOUTHERN DORCHESTER BAY</b>			
BOS088	To be closed	N/A	
BOS089 (Fox Point)	To be closed	N/A	
BOS090 (Commercial Point)	To be closed	N/A	
<b>TOTAL</b>		<b>0.00</b>	
<b>UPPER CHARLES</b>			
BOS032	Closed	N/A	
BOS033	Closed	N/A	
CAM005	3	0.84	8
CAM007	1	0.03	8
CAM009	2	0.01	8
CAM011	0	0.00	8
<b>TOTAL</b>		<b>0.88</b>	

**Exhibit B  
to Second Stipulation**

**SUMMARY OF TYPICAL YEAR CSO ACTIVATION FREQUENCY AND VOLUME**

OUTFALL	TYPICAL YEAR		REFERENCE <sup>(*)</sup>
	LONG TERM CONTROL PLAN 2005 <sup>(*)</sup>		
	Activation Frequency	Volume (MG)	
<b>LOWER CHARLES</b>			
BOS028	Closed	N/A	
BOS042	Closed	N/A	
BOS049	To be closed	N/A	
CAM017	1	0.45	8
MWR010	0	0.00	2
MWR018	0	0.00	1
MWR019	0	0.00	1
MWR020	0	0.00	1
MWR021	Closed	N/A	
MWR022	Closed	N/A	
MWR201 (Cottage Farm)	2	6.30	8
MWR023	2	0.13	
SOM010	Closed	N/A	
<b>TOTAL</b>		<b>6.88</b>	
<b>NEPONSET RIVER</b>			
BOS093	Closed	N/A	
BOS095	Closed	N/A	
<b>TOTAL</b>		<b>0.00</b>	
<b>BACK BAY FENS</b>			
BOS046	2	5.38	
<b>TOTAL</b>		<b>5.38</b>	

(\*) Long-term Control Plan activation frequency and volumes were established in the 1997 CSO Facilities Plan and Environmental Impact Report or as noted in the "Reference" column.

- 1- Re-assessing Long Term Floatables Control for Outfalls MWR018, 019 and 020, February 2001.
- 2- Report on Re-Assessment of CSO Activation Frequency and Volume for Outfall MWR010, April 2001, and supplemental letter report (Metcalf & Eddy, Inc.), May 31, 2001.
- 3- Report on Re-Assessment of CSO Activation Frequency and Volume to Dorchester Brook Conduit and Outfall BOS086, January 2001 and supplemental letter report (Metcalf & Eddy, Inc.), June 28, 2001.
- 4- MWRA Long Term CSO Control Plan, Fort Point Channel Sewer Separation and System Optimization Project, Level of Control at CSO Outfalls BOS072 and BOS073, June 7, 2004.
- 5- Final Variance Report for Alewife Brook and the Upper Mystic River, July 2003, and supplemental letter report (Metcalf & Eddy, Inc.), July 8, 2003.
- 6- East Boston Branch Sewer Relief Project Reevaluation Report, February 2004.
- 7- Supplemental Facilities Plan and Environmental Impact Report on the Long-term CSO Control Plan for North Dorchester Bay and Reserved Channel, April 27, 2004.
- 8- Recommendations and Proposed Schedule for Long-Term CSO Control for the Charles River, Alewife Brook and East Boston, August 2, 2005; MWRA Revised Recommended CSO Control Plan for the Charles River, Typical Year CSO Discharge Activations and Volumes, November 15, 2005; MWRA Long-Term CSO Control Plan, Response to Additional EPA Questions Regarding Prison Point Discharges, January 9, 2005 (2006).
- 9- MWRA Long Term CSO Control Plan Target CSO Activation Frequency and Volume by Outfall, December 9, 2005.
- 10- Prison Point Optimization Study, March 30, 2007; Proposed Modification of Long-Term Level of Control for the Prison Point CSO Facility, April 2008

## **APPENDIX IV**



























