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 Somerville
Department on Public Works
1 Franey Road
Somerville, MA 02145

is authorized to discharge from:

2 Combined Sewer Overflows (CSOs) listed in Attachment A

to the receiving waters named **Alewife Brook and Mystic 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 date of signature if no comments are received during public notice. If comments are received during public notice, this permit will 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 September 23, 2005.

This permit consists of **9** pages, **Attachments A, B, and C** in Part I, and 25 pages in Part II, the Standard Conditions.

Signed this day of , 2011

Stephen S. Perkins, Director	David Ferris, Director
Office of Ecosystem Protection	Massachusetts Wastewater Management Program
Environmental Protection Agency	Department of Environmental Protection
Region I	Commonwealth of Massachusetts
Boston, MA	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 **Attachment A**, subject to the following effluent limitations and requirements:

   a. The permittee must continue to 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 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 Alewife Brook and the Upper Mystic River have been granted a variance under the Massachusetts Surface Water Quality Standards (WQS) through September 1, 2013. A copy of the determination letter for this variance extension is included as **Attachment B** and the fact sheet accompanying this variance extension is included in the fact sheet as **Attachment A**. The conditions of this variance extension are incorporated into and are enforceable elements of this permit.

c. The permit's discharges must meet Federal and State WQS and be consistent with any water quality standards variances or variance extensions issued by MassDEP and approved by the EPA. The variance for the Alewife Brook/Upper Mystic River Basin was approved by EPA on August 18, 2011. Following the expiration of this EPA-approved variance, EPA may re-open the permit and establish, through a permit modification, limitations and conditions consistent with the WQS established by MassDEP and approved by EPA at that time.

B. Nine Minimum Controls (NMC) Implementation

Until the review and update of the NMC program described in Part I.D.5 is completed, the permittee shall continue to 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 NMC program no later than April 30th following the first full year of this 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, at a minimum: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. 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 I.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). For Outfall SOM001A, quantification must be through direct measurement using metering equipment. The permittee shall undertake all actions necessary to

ensure that the metering equipment is properly maintained and operated in order to provide accurate measurements of CSO flows. For Outfall SOM007A, quantification may be through direct measurement or estimation. When estimating, the permittee shall make reasonable efforts (i.e. gauging, measurements, calibration) 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;
- National Weather Service precipitation data from the nearest gauge where precipitation is available at daily (24-hour) intervals and the nearest gauge where precipitation data at minimum of one-hour intervals is available to the permittee. Cumulative precipitation per discharge event shall be provided; and
- A description of whether the discharge activation and volume for each CSO are in accordance with the Massachusetts Water Resources Authority (MWRA) Final CSO Facilities Plan or the "Notice of Project Change "document, or updates to these documents.

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 SOMERVILLE
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 its 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 Cambridge, 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 their potential public health impacts and to provide contact information and website links regarding CSOs. 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 Cambridge, 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, (c) potential health risks posed by exposure to CSO discharges, and (d) a link to the City's website which describes the progress on abatement projects (see Part I.C.9 below). 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 Massachusetts Department of Conservation and Recreation (DCR)}
   - newspapers of local circulation in the Alewife Brook/Upper Mystic River watershed

8. The permittee, in collaboration with MWRA and the City of Cambridge, shall provide email notification 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. (NMC# 8)

9. The permittee shall update its website to include general information regarding CSOs, including their potential health impacts, locations of its CSO discharges in the Upper Mystic River and Alewife Brook, 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 **Attachment A** 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 C**.

4. For the outfalls listed in **Attachment A,** provide the following information in the Annual Report for years 3 and 5 of this permit, 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 discharge events and size (volume) of such 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, 2012), 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.

6. A certification stating 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 **Attachment A** 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 Part II. D.1.e. (1) of this permit (Twenty-four hour reporting). An SSO Reporting Form which includes MassDEP Regional Office telephone numbers 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 **Attachment A** as soon as possible and in writing to the Director of the Office of Ecosystem Protection at EPA and to the Director of the Wastewater Management Program at MassDEP.

G. Certification and Signature of Reports

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

H. Report Submission

Signed and dated originals of all notifications and reports required herein, shall be submitted to the EPA and the State at the following addresses:

U.S. Environmental Protection Agency
Water Technical Unit (OES04-SMR)
5 Post Office Square - Suite 100
Boston, MA 02109-3912

The State Agency is:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887
Attention: Kevin Brander

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
1 Winter Street
Boston, MA 02108
Attention: David Ferris

and

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

Any verbal reports, if required in Parts I and/or II of this permit, shall be made to both EPA and to MassDEP.

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 (8) years. This period may be modified by alternative provisions of this permit or extended by request of the Director of EPA's Office of Ecosystem Protection at any time.

J. State Permit Conditions

This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.

This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

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

Summary of 2010 and Typical Year Model Simulation Results

Somerville CSO Discharges: Class B - Variance

	2010 Rainfall Under 2010 System Conditions [1]			Typical Year Rainfall Under 2010 System Conditions[2]		Typical Year Rainfall With Long Term CSO Control Plan[3]	
Outfall	**Activation Frequency[4]**	**Duration (hours)**	**Volume (MG)[5]**	**Activation Frequency**	**Volume (MG)**	**Activation Frequency**	**Volume (MG)**
SOM001A Alewife Brook	11	24.95	14.22	9	8.16	3	1.67
SOM007A[6] Upper Mystic River	10	28.91	22.34	3	1.51	3	3.48

1. These values are modeled estimates made by the MWRA and are based on actual 2010 rainfall data from CSO treatment facilities. From May 11, 2011 letter of M. Hornbrook (MWRA) to T. Borci (EPA) and K. Brander (MassDEP).

2. These values are based on MWRA modeled estimates and historical storm data with the current CSO configuration.

3. These values represent modeled estimates based on CSO configuration representing LTCP implementation as described in "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; and MWRA Long-Term CSO Control Plan Response to Additional EPA Questions Regarding Prison Point Discharges, January 9, 2005.

4. Activations per year

5. MG = Million Gallons

6. Activation frequency and volume for 2010 rainfall are from MWRA depth sensor measurement and MWRA model results, respectively.

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

LAURIE BURT
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, 2010 for a period of three years (to September 1, 2013). 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 $117 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, 2011 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 Waldo 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.

___08/26/2010_____
Date Issued

Glenn S. Haas
Assistant Commissioner
Bureau of Resource Protection

___09/01/2010_____
Effective Date

ATTACHMENT C

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.

Massachusetts Water Resources Authority

By its attorneys,

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Of Counsel:

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Boston, MA 02203
(617) 918-1735

Dated: March 15, 2006

B3131253.1

Exhibit A
to
Second Stipulation

MWRA Long-Term CSO Control Plan - Facilities Planning Documentation

Planning Document	Project	Receiving Water
Final Combined Sewer Overflow Facilities Plan and Environmental Impact Report, July 31, 1997	Hydraulic Relief for CAM005	Upper and Lower Charles River Basin
	Stony Brook Sewer Separation	
	Floatables Control at CAM007, CAM009, CAM011 and CAM017	
	Baffle Manhole Separation at SOM 001 and SOM 006-007	Alewife Brook/Upper Mystic River
	Hydraulic Relief for BOS 017[1]	Mystic/Chelsea Confluence
	Chelsea Branch Relief Sewer	
Minor modifications were addressed in Notice of Project Change, March 1999	Trunk Sewer Relief for CHE 002-004	
	Outfall Repairs and Floatables Control at CHE 008	
	Storage Conduit for BOS 019	Upper Inner Harbor
	Detention/Treatment Facility at Union Park Pump Station	Fort Point Channel
	South Dorchester Bay Sewer Separation	South Dorchester Bay
	Constitution Beach Sewer Separation	Constitution Beach
	Neponset River Sewer Separation	Neponset River
The following reports <u>supplement</u> information in the Final CSO Facilities Plan and Environmental Impact Report, July 31, 1997		
Upgrades to Existing CSO Facilities, Supplemental Environmental Impact Report, September 30, 1998	Cottage Farm Facility Upgrade	Upper Charles River Basin
	Prison Point Facility Upgrade[2]	Upper Inner Harbor
	Somerville Marginal Facility Upgrade	Upper Mystic River; Mystic/Chelsea Confluence
	Commercial Point Facility Upgrade	South Dorchester Bay
Upgrades to the Fox Point CSO Treatment Facility, Supplemental Environmental Impact Report, December 31, 1998	Fox Point Facility Upgrade	South Dorchester Bay
Fort Point Channel CSO Storage Conduit Notice of Project Change, June 2003, and MWRA Long Term CSO Control Plan, Fort Point Channel Sewer Separation and System Optimization Project, Level of Control at CSO Outfalls BOS072 and BOS073, letter dated June 7, 2004.	Sewer Separation for BOS072 and BOS073	Fort Point Channel

Exhibit A
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Second Stipulation

MWRA Long-Term CSO Control Plan - Facilities Planning Documentation

Planning Document	Project	Receiving Water
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	Alewife Brook
	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	
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	

[1] Also "MWRA Long-Term CSO Control Plan Target CSO Activation Frequency and Volume by Outfall," letter dated December 9, 2005; "MWRA Long-Term CSO Control Plan Response to Additional EPA Questions Regarding Prison Point Discharges," letter dated January 9, 2005 (2006).

[2] Also "MWRA Long-Term CSO Control Plan Target CSO Activation Frequency and Volume by Outfall," letter dated December 9, 2005.

Exhibit B
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SUMMARY OF TYPICAL YEAR CSO ACTIVATION FREQUENCY AND VOLUME

OUTFALL	TYPICAL YEAR		REFERENCE (*)
	LONG TERM CONTROL PLAN 2005 (*)		
	Activation Frequency	Volume (MG)	
ALEWIFE BROOK[1]			
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	
TOTAL		**7.29**	
UPPER MYSTIC RIVER			
SOM007A/MWR205A (Somerville Marginal)	3	3.48	
SOM007	Closed	N/A	
TOTAL		**3.48**	
MYSTIC / CHELSEA CONFLUENCE			
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	
TOTAL		**61.72**	
UPPER INNER HARBOR			
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)	30	335.00	1, 9
TOTAL		**338.04**	
LOWER INNER HARBOR			
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
TOTAL		**6.01**	

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SUMMARY OF TYPICAL YEAR CSO ACTIVATION FREQUENCY AND VOLUME

OUTFALL	TYPICAL YEAR		REFERENCE (*)
	LONG TERM CONTROL PLAN 2005 (*)		
	Activation Frequency	Volume (MG)	
CONSTITUTION BEACH			
MWR207	Closed	N/A	
TOTAL		**0.00**	
FORT POINT CHANNEL			
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
TOTAL		**73.89**	
RESERVED CHANNEL			
BOS076	3	0.91	7
BOS078	3	0.28	7
BOS079	1	0.04	7
BOS080	3	0.25	7
TOTAL		**1.48**	
NORTHERN DORCHESTER BAY			
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	
TOTAL		**0.00**	
SOUTHERN DORCHESTER BAY			
BOS088	To be closed	N/A	
BOS089 (Fox Point)	To be closed	N/A	
BOS090 (Commercial Point)	To be closed	N/A	
TOTAL		**0.00**	
UPPER CHARLES			
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
TOTAL		**0.88**	

Exhibit B
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SUMMARY OF TYPICAL YEAR CSO ACTIVATION FREQUENCY AND VOLUME

OUTFALL	TYPICAL YEAR		REFERENCE (*)
	LONG TERM CONTROL PLAN 2005 (*)		
	Activation Frequency	Volume (MG)	
LOWER CHARLES			
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	
TOTAL		**6.88**	
NEPONSET RIVER			
BOS093	Closed	N/A	
BOS095	Closed	N/A	
TOTAL		**0.00**	
BACK BAY FENS			
BOS046	2	5.38	
TOTAL		**5.38**	

(*) Long-term Control Plan activation frequency and volumes were established in the 1997 CSO Facilities Plan and Enviromental 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 Reagarding 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.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: MA0101982

PUBLIC NOTICE START AND END DATES: November 4, 2011 – December 3, 2011

NAME AND MAILING ADDRESS OF APPLICANT:

City of Somerville
Department of Public Works
1 Franey Road
Somerville, Massachusetts 02145

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

2 Combined Sewer Overflows (See Figures 1 and 2)

RECEIVING WATER(S): Mystic River and Alewife Brook
USGS Hydrologic Code #01090001, Mystic River Watershed

RECEIVING WATER CLASSIFICATION(S): Class B, both
Warm water fishery, CSO Variance

Contents

I. Proposed Action, Type of Facility, and Discharge Locations

The above named applicant has applied to the U.S. Environmental Protection Agency ("EPA") for the reissuance of its NPDES permit to discharge from two combined sewer overflows (CSOs) into the designated receiving waters. These CSO discharge locations are shown on **Figures 1 and 2.**

The City's current permit was issued on September 23, 2005, and expired on November 23, 2010, five years from the effective date. EPA received a completed permit renewal application from the applicant dated November 16, 2010. Since the permit renewal application was deemed timely and complete by EPA, the permit has been administratively continued pursuant to 40 CFR § 122.6.

II. Description of Discharges

The City of Somerville owns and operates a combined sewer system that serves a portion of the City. There are two (2) combined sewer overflows that discharge from the combined sewer system under certain wet weather conditions. The wastewater collected in this system is transported to the Massachusetts Water Resources Authority's (MWRA) Deer Island Wastewater Treatment Plant.

Outfall SOM001A is located near the Cambridge city line and is an outlet of the Tannery Brook drain to Alewife Brook. The Tannery Brook drain is a city storm drain that conveys storm drainage for a large portion of western and central Somerville, dry weather sanitary sewage from this same area, and combined sewage (CSO) from Somerville's existing combined sewer system. The majority of these flows discharge to MWRA's Alewife Brook Sewer in Cambridge. During certain rainfall events, flow from the Tannery Brook drain can also overflow directly to Alewife Brook, at Outfall SOM001A.

Outfall SOM007A is located near the Medford city line and discharges to the Mystic River upstream of the Amelia Earhart Dam. This outfall is also designated as MWR205A (in MWRA's permit #MA0103284) and is composed of treated CSO discharges from MWRA's Somerville Marginal Treatment Facility (MTF). This facility can accommodate flows of up to 245 million gallons per day (MGD) and provides screening, disinfection and dechlorination of combined sewerage flows prior to discharge. Typically, these treated CSOs discharge to MWR205A, but also discharge to SOM007A at certain high tide conditions.

A combined sewer system is a wastewater collection system owned by a State or municipality [as defined by Section 502(4) of the Clean Water Act (CWA)] that conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and storm water through a single-pipe system to a publicly owned treatment works (POTW) treatment plant (as defined in 40 CFR 403.3(p)).

A combined sewer overflow (CSO) is the discharge from a combined sewer system at a point prior to the POTW treatment plant. CSOs are point sources subject to NPDES permit requirements including both technology-based and water quality-based requirements of the

CWA. CSOs occur during wet weather[1] when the flow in the combined sewer system exceeds the system's capacity. CSOs are distinguished from bypasses which are "intentional diversions of waste streams from any portion of a treatment facility" (40 CFR §122.41(m)).

The City began separating its combined collection system (building separate sanitary sewage and storm water systems) in the early 1970s. Work to further abate CSOs has continued according to a schedule in a federal court order [U.S. v. M.D.C., et al., No. 85-0489 (D. Mass)], and includes further sewer separation, hydraulic relief projects, and floatables control structures. The frequency and volume of CSO discharges have been reduced as CSO abatement projects have been completed. However, as will be discussed further in Section IV, the required projects are not expected to eliminate CSO discharges entirely.

Modeled estimates of the number of CSO activations and volumes currently discharged in a typical year and in those actually discharged in 2009 based on actual rainfall data are shown in **Permit Attachment A.** The actual monitoring reports submitted by the City for these outfalls, which include a daily summary of precipitation and estimated or measured flows at each CSO may be found in the permit file.

III. Receiving Water Description

A. Upper Mystic River and Alewife Brook

The Massachusetts Surface Water Quality Standards, found at 314 CMR 4.00, designate the Mystic River (Segment MA71-02), and Alewife Brook (Segment MA71-04), as Class B warm water fisheries, with variances for CSO discharges. A more detailed discussion of the CSO variances may be found in Section IV below. Outfall SOM007A discharges to the Upper Mystic River and Outfall SOM001A discharges to Alewife Brook.

Class B waters are described in the SWQS (314 CMR 4.05(3)(b)) as "designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06(1)(d)(4), they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply") and suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value." A warm water fishery is defined in the MA SWQS as "waters in which the maximum mean monthly temperature generally exceeds 68° F (20° C) during the summer months and are not capable of sustaining a year-round population of cold water stenothermal

[1] Flows in combined sewers can be classified into two categories: dry weather flow and wet weather flow. Dryweather flow is the flow that results from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, and any other non-precipitation related flows (e.g. tidal infiltration). Wet weather flow includes all of the dry weather flow components plus storm water flow, including snow melt runoff (see 40 CFR 122.26(b)(13). The draft permit prohibits dry weather discharges from the City's CSOs.

aquatic life" (314 CMR §4.02) . These segments do not always meet the state water quality standards prescribed for Class B waters, especially after wet weather.

Sections 305(b) and 303(d) of the CWA require that States complete a water quality inventory and develop a list of impaired waters. Specifically, Section 303(d) of the CWA requires States to identify those water bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls, and as such, require the development of a Total Maximum Daily Load (TMDL) for each pollutant that is prohibiting a designated use(s) from being attained. In Massachusetts, these two evaluations have been combined into an Integrated List of Waters. The integrated list format provides the status of all assessed waters in a single, multi-part list.

The Mystic River and Alewife Brook are listed on the *Final Massachusetts Year 2008 Integrated List of Waters*[2] and on the *Proposed Massachusetts Year 2010 Integrated List of Waters*[3] as Category 5 waterbodies: "Waters requiring a TMDL." The pollutants and conditions contributing to this impairment are as follows:

The Mystic River is impaired for priority organics, metals, unionized ammonia, other inorganics, organic enrichment/low dissolved oxygen, pathogens, oil and grease, taste, odor and color.

Alewife Brook is impaired for metals, nutrients, organic enrichment/low dissolved oxygen, pathogens, oil and grease, taste, odor and color, and objectionable deposits.

The MassDEP is required under the CWA to develop a TMDL for a waterbody once it is identified as impaired. A TMDL is essentially a pollution budget designed to restore the health of a waterbody. A TMDL first identifies the source(s) of the pollutant from direct and indirect discharges in order to next determine the maximum amount of pollutant (including a margin of safety) that can be discharged to a specific water body while maintaining water quality standards for designated uses. It then outlines a plan to meet the goal. No TMDLs have been drafted or finalized for either waterbody.

IV. Permit Basis - Statutory and Regulatory Authority

A. Regulatory Background

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. The draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136. In this permit EPA considered (a) technology-

[2] http://www.mass.gov/dep/water/resources/08list2.pdf
[3] http://www.mass.gov/dep/water/resources/10list3.pdf

based requirements, (b) water quality-based requirements, and (c) all limitations and requirements in the current/existing permit, when developing the permit limits.

CSOs are point source discharges subject to NPDES permit requirements, including technology-based and water quality-based requirements of the CWA. Pursuant to a federal court decision, (Montgomery Environmental Coalition vs. Costle (646F.2d 568 (D.C. Cir 1980)) CSOs are not subject to secondary treatment standards found in Section 301(b)(1)(B) of the CWA. Rather, CSO are subject to technology- based requirements applicable to discharges other than publicly owned treatment works, found in Sections 301(b)(1)(B), 301(b)(2)(A) and 301(b)(2)(D). Pursuant to Section 301(b)(1)(C) of the CWA, CSOs are also subject to effluent limitations based on water quality standards.

On April 19, 1994 EPA published the National CSO Control Policy (59 FR 18688). The purpose of the National CSO Control Policy (the CSO Policy) was to establish a consistent national approach for controlling discharges from CSOs to the Nation's waters. The CSO Policy reiterates the goals of the 1989 National Combined Sewer Overflow (CSO) Control Strategy, which were:

- To ensure that if the CSO discharges occur, they are only as a result of wet weather;
- To bring all wet weather CSO discharge points into compliance with the technology based requirements of the CWA and applicable federal and state water quality standards; and
- To minimize water quality, aquatic biota, and human health impacts from wet weather flows.

To achieve these goals, the CSO Control Policy recommended technology–based limits developed using best professional judgment[4] (BPJ) and also recommended that each combined sewer system develop and implement a long-term CSO control plan (LTCP) that will ultimately result in compliance with the requirements of the CWA.

In 2001, Congress added Section 402(q) to the CWA to specifically address CSOs by stating that "Each permit, order, or decree issued pursuant to this Act after the date of enactment of this subsection for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994."

The CSO conditions in the draft permit are consistent with the National CSO Control Policy.

B. Technology-based requirements

As discussed above, EPA's CSO Policy recommended technology-based effluent limitations for CSOs using best professional judgment. The policy establishes the minimum technology-based requirement as the implementation of the nine minimum controls (NMCs). The NMCs are:

[4] Section 402(a)(1)(B) of the CWA provides the authority to establish case-by case technology –based limitations. 40 CFR 125.3 establishes requirements and factors to be considered in establishing case-by case technology–based limits using best professional judgment (BPJ). See specifically 125.3 (c)(2) and 125.3(d).

1. Proper operation and regular maintenance programs for the sewer system and the CSOs;
2. Maximize use of the collection system for storage;
3. Review and modification of pretreatment requirements to assure CSO impacts are minimized;
4. Maximization of the flow to the POTW for treatment;
5. Prohibition of CSOs during dry weather;
6. Control of solid and floatable material in CSOs;
7. Pollution prevention;
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and
9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

The CSO Policy required CSO communities to submit documentation of their implementation of the NMCs by January 1, 1997. The City of Somerville submitted its documentation on December 31, 1996 and its response to EPA comments regarding this documentation on May 1, 1997. The draft permit requires continued implementation of the NMC program, but also requires that the City review and update its program no later than April 30th following the first full year of the permit. The permit also authorizes modifications to the NMC program during the term of the permit to enhance its effectiveness, while requiring that certain minimum controls be maintained in any modification to the NMCs (see the minimum implementation levels in Part I.C. of the permit).

C. Water Quality Based Requirements

Water quality-based limitations are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water quality standards (WQS). See Section 301(b)(1)(C) of the CWA.

Receiving water requirements are established according to numerical and narrative standards adopted under state law for each water quality classification. When using chemical-specific numeric criteria to develop permit limits, both the acute and chronic aquatic-life criteria, expressed in terms of maximum allowable in-stream pollutant concentration, are used. Acute aquatic-life criteria are considered applicable to daily time periods (maximum daily limit) and chronic aquatic-life criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific limits are allowed under 40 CFR § 122.44(d)(1) and are implemented under 40 CFR § 122.45(d).

Narrative criteria from the State's WQS are often used to limit toxicity in discharges where (a) a specific pollutant can be identified as causing or contributing to the toxicity but the state has no numeric standard; or (b) toxicity cannot be traced to a specific pollutant.

EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal WQS. The permit must address any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality criterion. See 40 CFR Section 122.44(d)(1). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion. In determining reasonable potential, EPA considers (a) existing controls on point and non-point sources of pollution; (b) pollutant concentration and variability in the effluent and receiving water as determined from the permit application, Monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (c) sensitivity of the species to toxicity testing; (d) known water quality impacts of processes on wastewater; and, where appropriate, (e) dilution of the effluent in the receiving water.

WQS consist of three parts: (a) beneficial designated uses for a water body or a segment of a water body; (b) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (c) antidegradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards (MA SWQS), found at 314 CMR 4.00, include these elements. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site-specific criterion is established. The conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain WQS.

The WQS may also assign restrictions to receiving waters, which establish a subcategory of use assigned to a receiving water segment. One of the subcategories which may be established is for CSO-impacted segments. The permitting authority may allow overflow events to waters identified as impacted by CSOs provided that:

(1) an approved Final CSO Facilities Plan under 310 CMR 41.00 provides justification for the overflows (note – in this case the CSO Facilities Plan as defined by MassDEP and an LTCP, as defined by EPA, are the same document) ;

(2) the MassDEP finds through a use attainability analysis (UAA), and EPA concurs, that achieving a greater level of CSO control is not feasible for one of the reasons specified at 314 CMR 4.03(4);

(3) existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected; and

(4) public notice is provided through procedures for permit reissuance or facility planning under M.G.L.c.21 §§ 26 through 53 and regulations promulgated pursuant to M.G.L.c. 30A.

Conversely, if a Final CSO Facilities Plan shows that elimination of CSO discharges is feasible, through relocation or sewer separation, no CSO discharges are authorized into that receiving water and the CSO- impacted subcategory is removed.

The State may also, with EPA concurrence, establish a water quality standards variance. A variance is a short-term modification of the standards, designed to obtain the information necessary to determine the appropriate water quality standard and level of CSO control for the segment. Variances are discharger and pollutant specific, are time-limited, and do not forego the currently designed use. At the end of the variance, a final Administrative Determination is made regarding the appropriate level of CSO control and final water quality determinations, in accordance with National and State CSO Policy.

D. Antibacksliding

A permit may not be renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the anti-backsliding requirements of the CWA [see Sections 402(o) and 303(d)(4) of the CWA and 40 CFR §122.44(l)(1 and 2)]. EPA's antibacksliding provisions prohibit the relaxation of permit limits, standards, and conditions except under certain circumstances. Effluent limits based on BPJ, water quality, and state certification requirements must also meet the antibacksliding provisions found at Section 402(o) and 303(d)(4) of the CWA.

E. Antidegradation

Federal regulations found at 40 CFR Section 131.12 require states to develop and adopt a statewide antidegradation policy which maintains and protects existing instream water uses and the level of water quality necessary to protect the existing uses, and maintains the quality of waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water. The Massachusetts Antidegradation Regulations are found at 314 CMR 4.04. There are no new or increased discharges being proposed with this reissuance.

F. State Certification

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located that all water quality standards or other applicable requirements of state law, in accordance with Section 301(b)(1)(C) of the CWA, are satisfied. EPA permits are to include any conditions required in the state's certification as being necessary to ensure compliance with state water quality standards or other applicable requirements of state law. See CWA Section 401(a) and 40 CFR §124.53(e). Regulations governing state certification are set out at 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

V. Explanation of Permit's Effluent Limitations

A. MWRA CSO Facilities Plan/Water Quality Standards

The CSO Policy recommended that each combined sewer system prepare and implement a Long Term Control Plan (LTCP) that would result in attainment of CWA requirements. In 1987, MWRA stipulated to responsibility and legal liability for all combined sewer overflows hydraulically connected to its collection system[5], which in addition to discharges owned and operated by MWRA includes CSOs owned and operated by the communities of Boston, Cambridge, Chelsea, and Somerville. The CSO planning conducted by MWRA subsequent to 1987 addressed all of these CSOs, in accordance with the stipulation, and MWRA has funded the planning, design, and construction of the recommended CSO control facilities.

In 1994, MWRA completed a Conceptual CSO Control Plan that formed the basis of its final Combined Sewer Overflow Plan and Environmental Impact Report ("Facilities Plan"), completed in July 1997. The recommended CSO control projects included sewer separation, hydraulic relief and floatables control projects. The MWRA also estimated the activation frequency and volume for the remaining CSOs under baseline (1992) conditions and after completion of the projects recommended by the Facilities Plan.

For those CSOs that MWRA believed could not be eliminated, the plan included information to support a UAA pursuant to 40 CFR Section 131.10 (g). A UAA is an evaluation conducted by the state which supports removal of a National Goal Use based on criteria such as costs and impacts associated with attaining that use. The state submitted its final administrative determinations, including a UAA, to EPA for approval on December 31, 1997. On February 27, 1998, EPA approved the state's changes to water quality standards, which included removal of CSO-impacted designations for the Neponset River, North Dorchester Bay, South Dorchester Bay, and Constitution Beach; a SB-CSO designation for Boston Inner Harbor; a B-CSO designation for the Muddy River; and a tentative determination for the issuance of WQS variances for the Lower Charles River, the Alewife Brook, and the Upper Mystic River due to CSO discharges. Variance conditions for CSOs discharging to the Lower Charles River were issued on September 2, 1998 and variance conditions for CSOs discharging to the Alewife/Upper Mystic sub-basin were issued on March 5, 1999.

In accordance with the requirements of the variances, MWRA collected information that lead to several changes in the recommended CSO plan and the associated level of CSO control for the Cambridge and Somerville CSOs. These changes are discussed in detail in the attached Variance fact sheet (**Attachment A**). The major change was in the Alewife/Mystic basin, which resulted from a variance-required reassessment that is documented in the April 30, 2001 MWRA report titled "Notice of Project Change for the Long Term CSO Control Plan for Alewife Brook". The project change resulted from extensive field investigations in 1997 through 1999 by the City of Cambridge that revealed that in certain areas the combined sewer systems in Cambridge were

[5] Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflows

very different than the record plans used to develop the 1997 Plan, including the discovery of a previously unknown CSO discharge (CAM401B). When the sewer system model was updated to reflect the new system information it estimated baseline CSO discharges much higher than those previously estimated in the 1997 CSO Plan.

The field work done by Cambridge also indicated that previous work had underestimated the hydraulic capacity required in the Cambridge storm drain system to provide an appropriate level of storm drainage service. This discovery significantly raised the estimated cost of combined sewer separation. As a result of the project change, the costs for the construction of CSO controls on discharges to the Alewife Brook rose from $12.1 million to $ 74 million, primarily associated with the CSO infrastructure in Cambridge. The revised CSO Control Plan, and the estimated performance is documented in the MWRA report "Final Variance Report for Alewife Brook and the Upper Mystic River", July, 2003 and in a supplemental letter report by Metcalf & Eddy, Inc., dated July 8, 2003.

The City of Somerville has employed a boom for floatables control at Outfall SOM001A. In April 2012, the MWRA, in coordination with the City of Somerville, will begin the "Control Gate and Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief Project", which will provide hydraulic relief of Outfall SOM 001A. This project will reduce the quantity of sanitary/CSO flow to Outfall SOM001A by enlarging the connection between the Tannery Brook drain and MWRA's Alewife Brook Interceptor, a component of MWRA's LTCP that is expected to achieve the goals of the LTCP.

In the "Sewer Assessment Report" for the City of Somerville (Camp, Dresser & McKee, February 2009), separation of the "Marginal Area" (area discharging to Outfall SOM007A) was evaluated including the extension of the sanitary sewer system, conversion of the existing combined system into a separate storm drain system, increasing the capacity of sewers and drains in certain locations, and other projects. At that time, the cost of separation was estimated at $74 million and this separation was not considered cost effective given the high cost of the work, disruption to the residents and businesses, and the fact that existing overflow from this area currently receives treatment at the Somerville MTF. The Somerville MTF was upgraded in 2001 at a cost of $4 million as a part of the LTCP. There are no further scheduled projects for this portion of Somerville. The table below indicates that under current conditions, the goal of the LTCP for discharges from Outfall SOM007A may have been met with projects completed to date, based upon MWRA modeling.

Estimates of "Typical Year" discharge frequency and volume for outfalls SOM001A and SOM007A are presented below. The information shows that reductions in frequency and volume have been made from the baseline conditions, but that further reductions are necessary at SOM001A to achieve the goals of the Long Term CSO Control Plan (LTCP):

Outfall	Baseline (1)		Current Conditions (2)		Future Conditions (3)	
	Activation Frequency	Volume (MG)	Activation Frequency	Volume (MG)	Activation Frequency	Volume (MG)
SOM001A	10	9.89	9	8.16	3	1.67
SOM007A	11	6.72	3	1.51	3	3.48

(1) Typical year, prior to LTCP implementation, from April 2001 Notice of Project Change
(2) Typical year based on 2010 system conditions, from MWRA modeling
(3) Typical year based on complete LTCP implementation, from 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" (2006)

See Fact Sheet Attachment A for a more complete listing of completed and scheduled CSO projects. The "Future Conditions" column of the table above reflects the conditions after December 2015, when all CSO projects are scheduled to be completed for Boston Harbor and its tributaries. The completion of these projects will be followed by a period of monitoring in accordance with Schedule Seven of the federal court order [U.S. v. M.D.C., et al., No. 85-0489 (D. Mass)] to assess whether the goals of the LTCP have been met.

Variance conditions for the Alewife/Upper Mystic sub-basin have been in effect continuously since they were first issued on March 5**,** 1999. This variance was most recently extended by letter of August 26, 2010, was approved by EPA on August 18, 2011, and is effective through September 1, 2013.

A copy of the variance conditions for the Alewife/Upper Mystic basin may be found in **Permit Attachment B**. The Fact Sheet accompanying this variance is included in this fact sheet as **Attachment A**.

B. Water Quality-Based Effluent Limitations

The discharges from the Somerville CSOs into Alewife Brook and the Upper Mystic River have been limited in accordance with the conditions of the current water quality variance. As required by the variance, the typical year activation frequency and volume for each discharge shall be in accordance with the performance of the Revised Recommended Plan as characterized in the July, 1, 2003 MWRA Final Variance Report (these are the same activation frequency and discharge volume estimates that are presented in Exhibit B of the Second CSO Stipulation incorporated into the Federal Court Order on April 27, 2006.) These limits can be seen in **Attachment C** of the draft permit.

The variance includes other conditions, all of which have been incorporated into this permit. Variance conditions B.i. (implementation of the nine minimum controls) and C.i. (public notification) have been incorporated into Part I.C. of this permit because they require specific practices to meet technology-based nine minimum control requirements, and implementation of the nine minimum controls is a standard requirement for all NPDES permits authorizing

discharges from CSOs. The other requirements of the variance not specifically incorporated into the permit are incorporated by reference, and are equally enforceable conditions of this permit.

The current variance extends to September 1, 2013. At the end of the variance term, it may be extended, or MassDEP may make a final determination regarding water quality standards. If MassDEP should modify the variance or make a final determination regarding water quality standards during the term of this permit, this would be considered new information pursuant to 40 CFR part 122.62(a)(2) and would be cause for modification of this permit.

VI. Essential Fish Habitat Determination (EFH)

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Services (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat such as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). Adversely impact means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. § 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

EFH is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b) (1) (A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. The following is a list of the EFH species and applicable lifestage(s) for the area that includes Massachusetts Bay, to which the Alewife Brook and the Upper Mystic River discharge:

Species	Eggs	Larvae	Juveniles	Adults
Atlantic cod (*Gadus morhua*)	X	X	X	X
haddock (*Melanogrammus aeglefinus*)	X	X		
pollock (*Pollachius virens*)	X	X	X	X
whiting (*Merluccius bilinearis*)	X	X	X	X
red hake (*Urophycis chuss*)	X	X	X	X
white hake (*Urophycis tenuis*)	X	X	X	X
winter flounder (*Pseudopleuronectes americanus*)	X	X	X	X
yellowtail flounder (*Pleuronectes ferruginea*)	X	X	X	X
windowpane flounder (*Scopthalmus aquosus*)	X	X	X	X

American plaice (*Hippoglossoides platessoides*)	X	X	X	X
ocean pout (*Macrozoarces americanus*)	X	X	X	X
Atlantic halibut (*Hippoglossus hippoglossus*)	X	X	X	X
Atlantic sea scallop (*Placopecten magellanicus*)	X	X	X	X
Atlantic sea herring (*Clupea harengus*)		X	X	X
long finned squid (*Loligo pealei*)	n/a	n/a	X	X
short finned squid (*Illex illecebrosus*)	n/a	n/a	X	X
Atlantic butterfish (*Peprilus triacanthus*)	X	X	X	X
Atlantic mackerel (*Scomber scombrus*)	X	X	X	X
summer flounder (*Paralicthys dentatus*)				X
scup (*Stenotomus chrysops*)	n/a	n/a	X	X
black sea bass (*Centropristus striata*)	n/a		X	X
surf clam (*Spisula solidissima*)	n/a	n/a	X	X
bluefin tuna (*Thunnus thynnus*)			X	X

A review of the relevant essential fish habitat information provided by NMFS indicates that EFH has been designated for 23 managed species within the NMFS boundaries encompassing Massachusetts Bay. It is possible that a number of these species utilize these receiving waters for spawning, while others are present seasonally.

Based on the available information, EPA has determined that these CSO discharges, as restricted by the draft permit conditions, will not directly or indirectly cause adverse effects to EFH species or their habitat, because the draft permit contains conditions (NMCs) that are protective of the aquatic species in both receiving waters.

VII. Endangered Species Act (ESA)

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical (a "critical habitat"). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) typically administer Section 7

consultations for bird, terrestrial, and freshwater aquatic species. The NMFS typically administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants to see if any such listed species might potentially be impacted by the reissuance of this NPDES permit and has not found any such listed species. EPA has determined that there are no species of concern present in the vicinity of Somerville's CSO discharges. Therefore, EPA does not need to formally consult with NMFS or USFWS in regard to the provisions of the ESA.

EPA has structured the proposed limits to be sufficiently stringent to assure that Water Quality Standards will be met. The effluent limits established in this permit ensure the protection of aquatic life and maintenance of the receiving water as an aquatic habitat. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to both NMFS and USFWS.

Other Conditions

The remaining conditions of the permit are based on the NPDES regulations, 40 CFR Parts 122 though 125, and consist primarily of management requirements common to all permits.

VIII. State Certification Requirements

EPA may not issue a permit unless the MassDEP certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the MassDEP have reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

IX. Public Comment Period, Public Hearing, and Procedures for Final Decision

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to George Papadopoulos, U.S. EPA, Office of Ecosystem Protection**,** Industrial Permits Branch, Mailcode OEP 06-1, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

X. EPA and MassDEP Contacts

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays, from the EPA and MassDEP contacts below:

George Papadopoulos, Industrial Permits Branch
5 Post Office Square - Suite 100 - Mailcode OEP 06-1
Boston, MA 02109-3912
Papadopoulos.george@epa.gov
Telephone: (617) 918-1579 FAX: (617) 918-1505

Catherine Vakalopoulos, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Discharge Permit Program
1 Winter Street
Boston, Massachusetts 02108
catherine.vakalopoulos@state.ma.us
Telephone: (617) 348-4026; FAX: (617) 292-5696

October 19, 2011
Date

Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Figure 1 – Outfall SOM001A

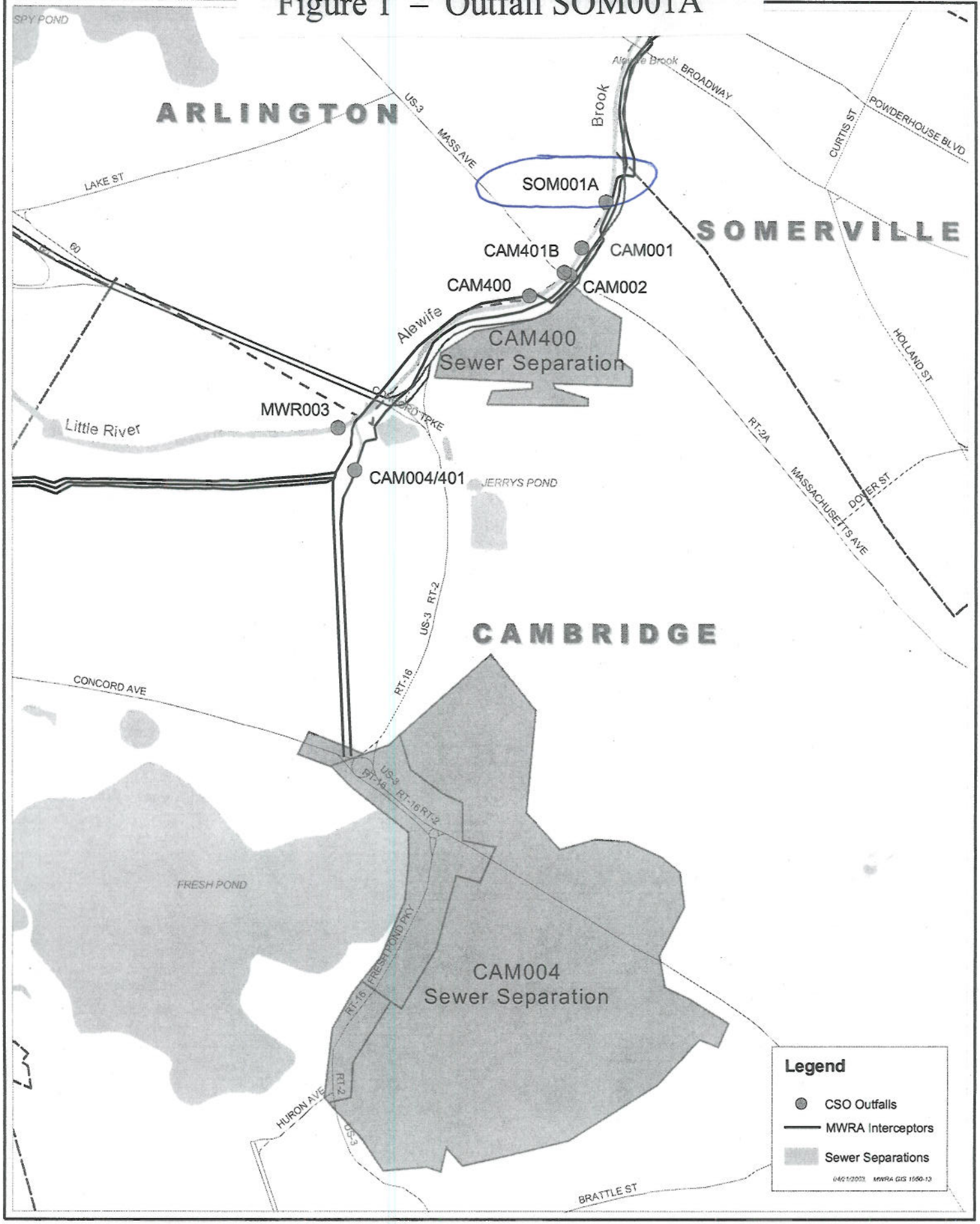
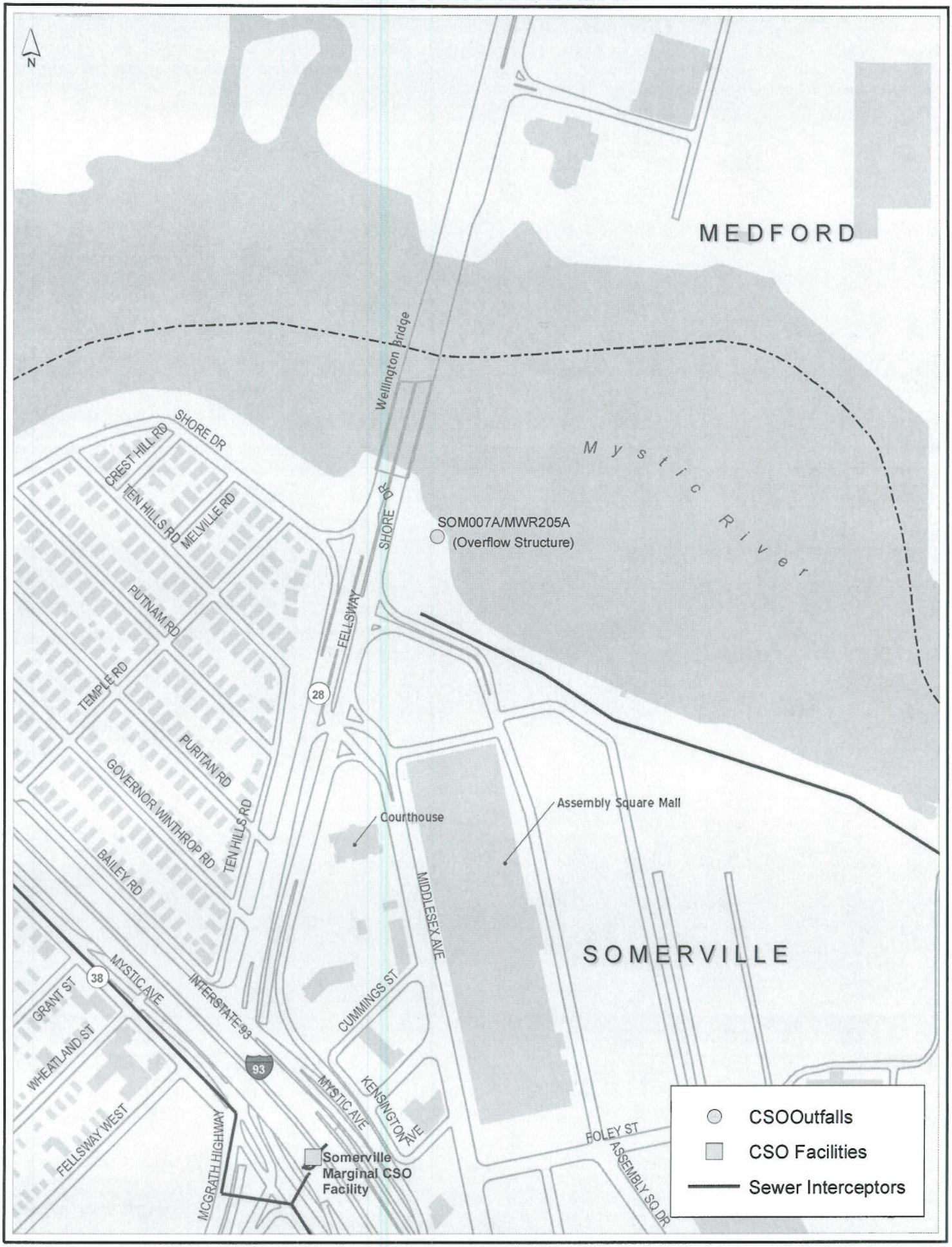


Figure 2
Outfall SOM007A/MWR205A



OCTOBER 5, 2011 MWRAGIS 1050-23

TENTATIVE DETERMINATION TO EXTEND VARIANCE
FOR COMBINED SEWER OVERFLOW DISCHARGES
TO
ALEWIFE BROOK/UPPER MYSTIC RIVER BASIN

FACT SHEET

This document is intended to provide a summary of the activities that have taken place since the Massachusetts Department of Environmental Protection's ("DEP") issuance of the Combined Sewer Overflow ("CSO") Variance for the Alewife Brook/Upper Mystic River Basin on March 5, 1999, and to provide a frame of reference for DEP's decision to extend the Variance for a period not to exceed three years, to September 1, 2013.

I. Background on CSO Control and Variance

Boston Harbor Case

As part of the Boston Harbor Case (D. Mass. C.A. No. 85-0489-RGS), the Massachusetts Water Resources Authority ("MWRA") is required to undertake corrective actions in its approved Long Term CSO Control Plan ("LTCP") to reduce or eliminate CSO discharges to Alewife Brook/Upper Mystic River. The LTCP is comprised of 35 wastewater system improvement projects that will reduce or eliminate CSO discharges at 84 outfalls in the metropolitan Boston area at an MWRA cost of $884.1 million. The original long-term control plan for Alewife Brook/Upper Mystic River had an estimated cost of $13.8 million in 1997. Currently, the cost to provide CSO control to Alewife Brook/Upper Mystic River is estimated at $117 million, including MWRA and City of Cambridge cost shares.

MWRA has completed 24 of the 35 projects in the LTCP. Eight of the projects are currently in construction, including two of the five projects in the Alewife Brook CSO control plan. Two other projects, including an Alewife Brook project, are in design, and MWRA is scheduled to commence design of the last Alewife Brook project in April 2012. During 2010, MWRA expects that it will complete the East Boston Branch Sewer Relief project (Interceptor Relief for BOS003-014), that BWSC will complete the Bulfinch Triangle sewer separation project, and that the City of Cambridge will complete the Alewife Brook related project for interceptor connection relief and floatables control at CAM002 and CAM401B and floatables control at CAM001. Completion of these three projects in 2010 will bring the number of completed projects to 27 of the 35 projects in the LTCP. In addition, the City of Cambridge plans to commence construction of the CAM004 stormwater outfall and wetland basin (Contract 12) in 2010.

In July 1998, MWRA and the City of Cambridge began sewer separation for Alewife Brook CSO control in accordance with the recommended plan in the 1997 Facilities Plan/EIR and in compliance with the original set of milestones for this project in the Federal District Court schedule. The City of Cambridge completed four initial construction contracts in 1997-2002. The completed work significantly reduced CSO discharges to Alewife Brook. Hydraulic model simulations show that CSO discharges were reduced from 63 activations and 50 million gallons

annual volume in a typical year to 25 activations and 33 million gallons annual volume. MWRA, in cooperation with the City of Somerville, also completed the LTCP projects in the Upper Mystic River Basin in the period 1996 through 2001. The projects involved Somerville Marginal CSO Facility upgrades, completed in 2001, and elimination of CSO discharges at outfalls SOM006 and SOM007 by separating manholes common to the local storm drain and sewer systems, completed in 1996. CSO discharges to the Upper Mystic River Basin, not including Alewife Brook, are now limited to infrequent, treated discharges from the Somerville Marginal facility through the high tide outfall (SOM007A/MWR205A) upstream of the Amelia Earhart Dam.

CSO Control Plan Reassessment

In 2000, MWRA and the City of Cambridge suspended further design work and construction contract awards related to the 1997 Alewife Brook CSO plan because new information to support design showed that conditions in the Cambridge combined sewer system were markedly different from conditions assumed in 1997. MWRA and Cambridge determined that considerably more work, as well as an increased scope of work, would be necessary to meet the 1997 CSO control goals for Alewife Brook.

During early design efforts to implement the 1997 CSO control program, the City of Cambridge and MWRA collected new information that showed that the extent of Cambridge's combined sewer system in the Alewife Brook watershed exceeded what was documented in the 1997 FEIR. A previously unknown CSO outfall, CAM401B, was also discovered. MWRA subsequently determined that the CSO activations and volumes in this basin greatly exceeded the estimates in the 1997 FEIR, and that the 1997 recommended plan, at an estimated total cost of about $13.8 million, could not achieve the recommended level of control.

To address this new information, MWRA and Cambridge completed a reevaluation of the original CSO control plan for Alewife Brook and on April 30, 2001, filed a Notice of Project Change ("NPC") under the Massachusetts Environmental Policy Act ("MEPA"). While the level of CSO control for the revised plan is comparable to the original 1997 plan and remains essentially one of targeted sewer separation, certain elements of the original plan, including areas slated for separation, were substantially modified, resulting in a change in expected impacts and mitigation measures, including measures to mitigate the effects of higher stormwater discharges on flooding of Alewife Brook. The projected cost of the project also increased significantly, from $13.8 million in the 1997 plan to approximately $117 million, based on most recent estimates. Notably, sewer separation associated with the CAM004 outfall requires construction of a new stormwater outfall to convey flows to a new wetland detention basin proposed within the Massachusetts Department of Conservation and Recreation ("DCR") Alewife Reservation.

In the September 15, 2001 Certification on the NPC, MEPA required that MWRA and Cambridge prepare and file with MEPA a comprehensive Response to Comments document (the "RTC"). On May 30, 2003 MWRA and Cambridge filed the RTC. The recommended plan now includes a larger stormwater detention basin in the Alewife Reservation (including on-site wetland replication and Compensatory Flood Storage) that has additional benefits related to habitat, public access, recreation, and public education. The work in the Alewife Reservation has been coordinated with staff from DCR.

The reassessment of predicted peak separate stormwater flows from the separation project indicates that there will be a "slight decrease to the flows to Alewife Brook after project implementation." DEP concurred with the revised CSO abatement plan as a suitable substitute for the original plan, given the changed conditions. DEP reserved judgment on the final level of CSO control and water quality standard until sufficient information was compiled during the course of the CSO Variance.

Final Variance Report (CSO Reassessment)

On July 1, 2003, in accordance with Section C. (1) of Alewife/Upper Mystic CSO Variance, MWRA submitted to DEP and EPA the Final Variance Report for the Alewife Brook and Upper Mystic River. This report provided detailed technical and financial information to support the long-term CSO abatement plan in the Alewife/Upper Mystic watershed. In the Final Variance Report, MWRA reported that additional CSO controls beyond those included in their revised CSO plan would not be cost-effective and would not provide meaningful water quality improvement, primarily due to the predominance of non-CSO pollution sources. Based on the technical and financial analyses included in the Final Variance Report, MWRA contended that the criteria needed to support a $B_{(cso)}$ classification were met, and MWRA requested that DEP take such administrative action.

During public review of the Final Variance Report, several advocacy groups and other stakeholders requested that DEP allow additional time for review and comment on this critical document. It also became apparent that there would be insufficient time to provide for this extended public review, to resolve outstanding technical issues relating to public and agency review, and to make administrative water quality standard determinations in this watershed within the time frame required under the first Variance extension. Due to these factors, and with public support, DEP again formally extended the CSO Variance, from October 1, 2003 to September 1, 2004. EPA issued written comments indicating that it was not in opposition to the second Variance extension.

This second Variance extension maintained most of the conditions included in the previous CSO Variance, and MWRA, Cambridge, and Somerville remained responsible for implementing the Nine Minimum Controls, monitoring CSO discharges, implementing the cost-effective CSO measures included in the recommended plan from the NPC, and implementing a receiving water monitoring program.

After the Final Variance Report was issued MWRA presented additional information on its financial capability analysis, incorporating into the analysis the costs of housing in the Boston metropolitan area.

Regulatory and Court Approval of a Revised LTCP

In August 2005, MWRA recommended a revised region-wide LTCP that included a schedule for implementing the revised plan for Alewife Brook. In March 2006, MWRA reached agreement with EPA, DEP and the U.S. Department of Justice ("DOJ") on the plan and a new schedule. The agreement was filed with the Federal District Court as part of a joint motion to

amend the court schedule in the Boston Harbor Case (D. Mass. C.A. No. 85-0489). At that time, DEP and EPA determined that MWRA's LTCP satisfied the requirements for a variance from water quality standards for CSO discharges to the Alewife Brook/Upper Mystic River Basin through 2020, when the LTCP would be fully implemented and verification of attainment of the long-term levels of CSO control would be made. As part of this determination, DEP and EPA agreed that DEP would issue and EPA would approve five consecutive extensions on no more than a three-year duration each through 2020, which would be consistent with and limited to the requirements in MWRA's LTCP.

In April 2006, the Court allowed the joint motion and issued an Order with a new schedule. Under the Order, MWRA has until the year 2020 to complete the remaining CSO work and subsequent monitoring to verify that the long-term CSO control goals are achieved. In addition, the United States and MWRA agreed to withdraw the February 27, 1987 Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflows and replace it with a Second Stipulation that requires MWRA to implement the CSO requirements set forth in the court schedule and to meet the levels of control described in MWRA's LTCP. In July 2006, the Court accepted revisions to Schedule Six incorporating a new Schedule Seven. The revisions include modified or additional milestones for projects in the Alewife Brook, Charles River and East Boston CSO plans.

As noted above, MWRA and the City of Cambridge are currently in the process of designing and constructing several CSO projects that, when completed, will further reduce CSO discharges to the Alewife Brook.

CSO Variance

A three-year Variance for CSO discharges to the Alewife Brook/Upper Mystic River Basin was issued by DEP on March 5, 1999. The Variance is a short-term modification of the Water Quality Standards issued by DEP subject to approval by the United States Environmental Protection Agency ("EPA"). The Variance allows limited CSO discharges from the outfalls along the Alewife Brook/Upper Mystic River permitted to MWRA and the cities of Cambridge and Somerville, subject to specific conditions. Other standards and criteria of the receiving waters' Class B designation are unaffected and remain in force.

The CSO Variance was issued in 1999 to allow time for DEP to obtain the information necessary to determine the appropriate long-term water quality standard and level of CSO control for the Basin, while ensuring that recommended CSO controls approved by DEP would be implemented. The Variance required the implementation of the cost-effective CSO control actions included in MWRA's Final CSO Facilities Plan and Environmental Impact Report, July 31, 1997 (the "FEIR") and also required other actions necessary to properly assess pollutant loads in the Basin and minimize the impact of CSO discharges.

The March 5, 1999 Alewife Brook/Upper Mystic River Basin Variance included specific conditions on activities of MWRA and the cities of Cambridge and Somerville including the submittal of a Reassessment Report by MWRA summarizing information gathered during the Variance process and reevaluating the costs and benefits of additional CSO controls in the

Alewife Brook/Upper Mystic River Basin, up to and including elimination of CSOs. The Reassessment Report was intended to provide the basis for a final determination on the appropriate long-term level of CSO control.

With the variance, DEP approved MWRA's LTCP for the Alewife Brook/Upper Mystic River Basin and required MWRA to implement the LTCP, evaluate the potential for infiltration/inflow (I/I) removal to increase CSO control and benefits, and conduct additional water quality investigations to assess pollutant loadings to these waters. With the new information collected during the variance period, MWRA was required to report on whether additional CSO control measures beyond the LTCP recommendations might be cost effective.

On December 14, 2001, MWRA submitted a request to DEP to extend the Alewife Brook/Upper Mystic River Basin Variance for 18 months and defer the requirement for the CSO Reassessment Report until July 1, 2003. After review of public comments on the MWRA request, DEP agreed that an extension was reasonable and necessary to complete the data collection and technical reports required under the Variance, and on May 5, 2002, DEP extended the Variance to September 5, 2003.

In July 2003, MWRA submitted a final variance reassessment report to DEP and MEPA, which evaluated alternative levels of CSO control and affirmed the recommended alternative and level of control that are now a part of an approved LTCP. DEP extended the variance again in 2003 for nine months and in both 2004 and 2007 for three years, respectively. Water quality data collection and water quality characterization by MWRA and other parties, including the Mystic River Watershed Association, have continued through these extension periods. The current variance extension expires August 31, 2010.

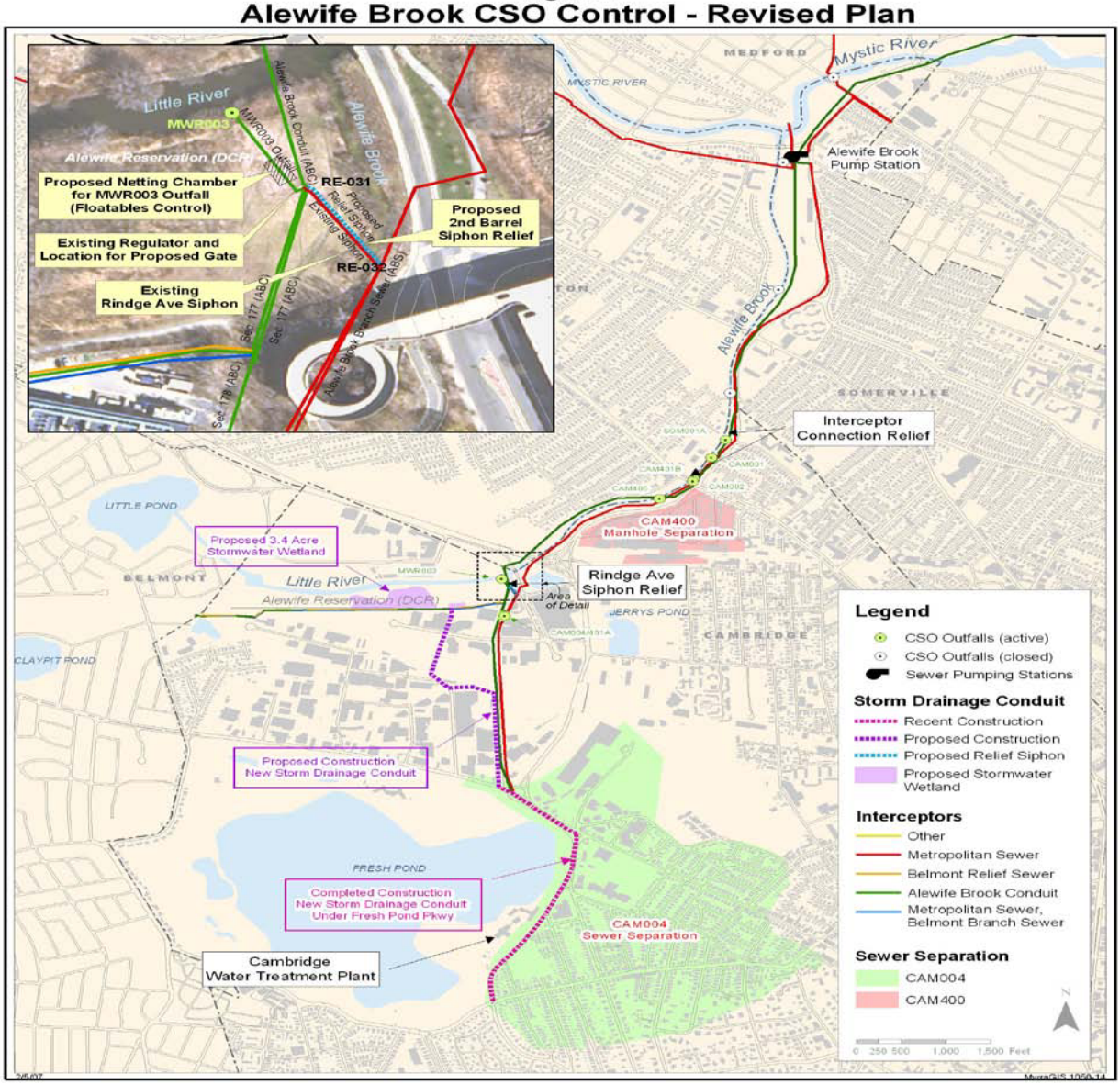
II. Level of CSO Control

Revised CSO Control Plan

The revised plan for CSO control along Alewife Brook comprises five component projects that were incorporated into Schedule Seven by the Federal District Court in the Boston Harbor Case (D. Mass. C.A. No. 85-0489) in April 2006. The projects include CAM004 Stormwater Outfall and Detention Basin (Cambridge Contract 12); CAM004 Sewer Separation (Cambridge Contracts 8, 8A and 9); CAM400 Manhole Separation and Interceptor Connection Relief and Floatables Control at CAM002, CAM401B, and SOM001A, and Floatables Control at CAM001 (Cambridge Contract 4/13); and Control Gate/Floatables Control at Outfall MWR003, MWRA Rindge Avenue Siphon Relief and Interceptor Connection Relief and Floatables Control for Outfall SOM001A (all included in a planned MWRA contract). In addition, the long-term performance of the MWRA Alewife Brook interceptors and the long-term levels of CSO control at the Alewife outfalls assume completion of pumping improvements at the Alewife Brook Pumping Station that are intended to restore the pumping capacity to its original design level.

Together, these projects are intended to further reduce CSO discharges to the Alewife Brook from the original 63 activations and 50 million gallons annual volume in a typical year to 7 activations and 7.3 million gallons annual volume. The total cost of the CSO control plan for Alewife Brook/Upper Mystic River Basin has increased from $13.8 million in 1997 to approximately $117 million today, a cost that is shared by MWRA and the City of Cambridge.

Figure 1
Alewife Brook CSO Control - Revised Plan



Implementation of these projects was delayed due to a wetlands permit appeal in 2005. After several years of delay due to the appeal, the City of Cambridge was able to make substantial progress with design of three of the five Alewife Brook projects in 2009 and to award a contract for two of the projects in January 2010.

The revised Alewife Brook CSO control plan is predicted to have the following benefits:

- 85 percent reduction in annual CSO volume discharged in a typical year;
- compliance with Class B water quality standards 98.5% of the time;
- improved stormwater quality resulting in a reduction in stormwater pollutant loads; and creation of additional wetlands and enhancement of walking trails in the Alewife Reservation.

Figure 2
Alewife Brook/Upper Mystic River Basin
CSO Locations and Projects

Completed Improvements (Alewife Brook and Upper Mystic River)

- Completion of early construction contracts for CAM004 Sewer Separation, by Cambridge in the period 1997-2002;
- Interim improvements to MWRA's Alewife Brook Pumping Station, by MWRA in 2009;
- Upgrades to the Somerville Marginal CSO Treatment Facility (affecting the infrequent discharges at outfall SOM007A/MWR205A), which MWRA completed in 2001 at a cost of $4.0 million;
- Somerville manhole separation and closing of outfalls SOM001, SOM002A, SOM003, SOM004, SOM006 and SOM007, which City of Somerville completed in 1997 at a cost of $500,000 funded by MWRA.

Scheduled Improvements (Alewife Brook)

- Separation of common manholes in the CAM400 tributary area and elimination of CSO discharges at this outfall;
- Relief of interceptor connections at regulators associated with outfalls CAM002 and CAM401B, and floatables control at these outfalls, and Floatables control at outfalls CAM001 and CAM401A;
- Construction of a new stormwater outfall and vegetated stormwater wetland to ensure that the separated stormwater flows from the CAM004 area will not worsen flooding along Alewife Brook and that the new stormwater flows receive a level of treatment;
- Sewer separation in the CAM004 area and elimination of CSO discharges to this outfall. Initial phases of this work have been completed by the City of Cambridge with MWRA funding and have significantly lowered CSO discharges to Alewife Brook In addition, MWRA has completed interim improvements at its Alewife Brook Pumping Station that have also reduced CSO discharges to Alewife Brook;
- Construction of an overflow control gate and floatables control at outfall MWR003, relief of MWRA's Rindge Avenue Siphon, and interceptor connection relief and floatables control at outfall SOM01A; and
- Long-term improvements to MWRA's Alewife Brook Pumping Station.

Actual and Anticipated CSO Reductions

MWRA, with the cooperation of the cities of Cambridge and Somerville, has reduced CSO discharges and impacts to the Alewife Brook and Upper Mystic River through initial implementation of the long-term CSO control plan. These completed efforts include upgrade of MWRA's Somerville-Marginal CSO treatment facility; separation of common sewer and storm drain manholes to eliminate CSOs at several outfalls permitted to the City of Somerville; construction of storm drain and sewer trunk lines downstream of the CAM004 sewer separation areas, along Fresh Pond Parkway, and interim improvements to MWRA's Alewife Brook Pumping Station.

Somerville's work to separate common manholes has resulted in the elimination of untreated discharges at outfalls along the Upper Mystic River and the closing of several CSO outfalls along the Alewife Brook. The only remaining CSO outfall along the Upper Mystic

River is outfall MWR205A/SOM007A, which discharges CSO flows treated at the Somerville Marginal Facility at a point upstream of Amelia Earhart Dam during high tide. At lower tides, the treated flows are discharged to tidal waters below the dam, at outfall MWR205.

Construction completed to date, including early Cambridge construction contracts for CAM004 Sewer Separation and MWRA interim improvements to the Alewife Brook Pumping Station, has already reduced CSO activations and discharges along the Alewife Brook. Activation frequency has decreased from 63 to 22 in a typical rain year and discharge volume has decreased from 50 million to 27 million gallons.

Long-term Performance

MWRA's recommended plan is predicted to reduce annual CSO volume to Alewife Brook/Upper Mystic River by 85% in a typical year, from 50 million gallons to 7.3 million gallons. CSO activations in a typical year will be reduced from 63 to 7. At the recommended control levels, water quality will comply with Class B water quality criteria 98.5 percent of the time. Levels of CSO control at outfalls on the Alewife Brook for baseline (1997), current (2009) and revised recommend plan conditions are shown in Table 1.

Table 1: CSO Discharges at Alewife Brook Outfalls in a Typical Year

Outfall	Baseline Condition[1]		Current Conditions[2]		Long-term CSO Control Plan[3]	
	Activations	Volume (MG)	Activations	Volume (MG)	Activations	Volume (MG)
CAM001	1	0.01	0	0.00	5	0.19
CAM002	7	1.57	8	1.81	4	0.69
MWR003	1	0.06	1	0.07	5	0.98
CAM004	63	24.10	10	5.89	Closed	-
CAM400	10	0.80	8	0.63	Closed	-
CAM401A	7	2.74	5	1.46	5	1.61
CAM401B	25	10.50	22	8.47	7	2.15
SOM001A	10	9.89	9	8.21	3	1.67
SOM001	Closed		Closed		Closed	
SOM002A	Closed		Closed		Closed	
SOM003	Closed		Closed		Closed	
SOM004	Closed		Closed		Closed	
Total Alewife	63	49.70	22	26.53	7	7.29
SOM007A/ MWR205A	11	6.72	9	2.05	3	3.48
SOM007	2	0.04	Closed		Closed	
Total Upper Mystic	11	6.76	9	2.05	3	3.48

[1] Updated estimates from the April 2001 Notice of Project Change (NPC).

(2) From MWRA modeling of 2009 system conditions.

(3) From model predictions in Final Variance Report (Alewife) and 1997 FEIR (Upper Mystic). Construction of the long-term CSO control plan for Boston Harbor and its tributaries is scheduled to be complete by December 2015. The construction will be followed by a period of monitoring in accordance with Schedule Seven of the Boston Harbor Case.

Cost of the Long-term CSO Control Plan

The cost of the Alewife Brook/Mystic River CSO control plan has grown from $13.8 million in 1997 to approximately $117 million for the current recommended plan, a cost that is shared by Cambridge and MWRA. The large increase in cost is due to engineering investigation of the Cambridge sewer system revealing the extent of required sewer separation was substantially greater than originally assumed, higher unit costs for installation of new storm drain and other elements of the work, and the need for a new outfall and stormwater detention basin required to manage the increase in separate stormwater volumes that were not included in the original plan.

Implementation Schedule

Construction of all five projects is scheduled to be completed by December 2015. Cambridge combined two of the Alewife Brook CSO projects into one construction contract, Contract 4/13, which Cambridge commenced in January 2010. The work of this contract will separate common storm drain and sewer manholes in the neighborhoods near Massachusetts Avenue and Alewife Brook Parkway and will also upgrade city sewer system connections to MWRA's interceptor sewer, and provide floatables control at CSO outfalls along Alewife Brook near Massachusetts Avenue. The contractor plans to complete this work by the end of 2010.

Cambridge is also nearing the completion of final design for the stormwater outfall and wetland basin in the DCR Alewife Reservation. The wetland basin will accommodate stormwater flows that will be removed from the sewer system in future contracts and will attenuate the stormwater flows to avoid contributing to Alewife Brook flood levels. Cambridge plans to commence these construction contracts in the summer of 2010, and the work of these contracts is scheduled to be complete by the summer of 2012. Cambridge and MWRA have worked closely with DCR during development and environmental review of the Alewife Brook CSO control plan to ensure that the new facilities are compatible with DCR's Master Plan for the Alewife Reservation.

In addition, Cambridge plans to commence design of a fourth project, involving sewer separation in the area east of Fresh Pond Reservation, in the summer of 2010 and MWRA plans to commence design of the fifth and last Alewife project in 2012. The latter project involves improvements related to MWRA's CSO outfall to Alewife Brook (Outfall MWR003), located behind the Alewife Station, as well as improvements to the City of Somerville's Tannery Brook Conduit connection to MWRA's system and Somerville's related CSO outfall (Outfall SOM001A).

MWRA completed interim improvements to the Alewife Brook Pumping Station in 2009. In April 2010, MWRA issued the Notice to Proceed with the design contract for long-term improvements to the station. The project schedule calls for construction of the long-term improvements to be completed by March 2013.

Other Priorities to Ensure Continued Progress

Further water quality improvements in the Alewife Brook/Upper Mystic River watershed will rely largely on municipal efforts to address illegal discharges to storm drains, storm water Best Management Practices and other storm water impacts as they contribute to wet weather issues affecting these watersheds. DEP recognizes that progress is continuing to be made in these areas.

DEP also acknowledges the importance of proper operation, maintenance, and rehabilitation of MWRA and community sewer and storm water systems to assure optimized conditions for conveying wastewater flows through the system for treatment and discharge at Deer Island and improving storm water quality. Sewer system repairs and cleaning have resulted in improved conveyance capacities in a number of locations and have also contributed to mitigating CSO discharges by addressing localized system flow constraints.

III. Proposed Variance Extension and Next Steps

As part of the agreement on the LTCP reached in March 2006 among EPA, DEP, DOJ and MWRA, MWRA requested that the Variance for the Alewife Brook/Upper Mystic River Basin be reissued through 2020 when MWRA must complete the region-wide LTCP and subsequent monitoring to verify that the long-term CSO control goals are achieved. At that time, DEP and EPA determined that MWRA's LTCP satisfied the requirements for a variance from water quality standards for CSO discharges to the Alewife Brook/Upper Mystic River Basin through 2020. As part of this determination, DEP and EPA agreed that DEP would issue and EPA would approve five consecutive extensions on no more than a three-year duration each through 2020, which would be consistent with and limited to the requirements in MWRA's LTCP. MWRA bases this request on the work completed to date to achieve a high level of CSO control at certain outfalls, the expectation for significant CSO control and water quality improvement with the remaining CSO projects in the Alewife Brook CSO control plan, and the desire to provide a level of financial certainty and stability for its ratepayers.

Substantial and Widespread Social and Economic Impact

DEP has emphasized cost-effectiveness for CSO long-term control plans, to ensure that financial resources for pollution abatement actually provide improvements in water quality. The principles of cost-effectiveness and water quality benefits have been a major factor used by MWRA in the development of its present $884.1 million CSO abatement plan. MWRA will spend more than $173 million on CSO projects over the five-year period July 2010 through June 2015 (FY11-FY15), which is 15 percent of all planned capital spending and 26 percent of wastewater capital spending in the same period. MWRA sewer rates are among the highest in the nation and are projected to increase significantly over the next five years.

Implementation of the revised recommended plan will reduce CSO discharges to the Alewife Brook to a level that will allow attainment of Class B water quality standards 98.5 percent of the time. In accordance with DEP's CSO Guidance, cost-effectiveness, protection of sensitive uses, and the financial capability of CSO permittees are all important factors in making determinations on the appropriate level of CSO control.

MWRA submitted data related to DEP's finding of "substantial and widespread economic and social impact," the basis for its issuance of a Variance in 1997 (See 314 CMR 4.03(4)(f)). DEP documented for the current Variance ending August 31, 2010, its review of a report by Robert N. Stavins, Assessment of the Economic Impact of Additional Combined Sewer Overflow Controls on Households and Communities in the Massachusetts Water Resources Service Area, dated March 17, 2004. DEP also reviewed the Affordability Analysis Worksheets included in Appendix H of the Cottage Farm Report dated January 2004, which are based on EPA's Interim Economic Guidance for Water Quality Standards.

DEP's conclusions from its review of the documents submitted by MWRA and determination in support of the Variance Extension request have not changed. DEP, upon issuance of the 2007 Variance Extension, indicated that it would evaluate the information required by the Variance to determine whether there are additional cost-effective CSO controls. DEP has reviewed the new information regarding revisions to the Alewife Brook/Upper Mystic River CSO plan, as well as other revisions and cost changes in MWRA's LTCP, and has determined that additional controls beyond those recommended in the MWRA CSO Plan would not be cost-effective or affordable.

Based on these important considerations, DEP has determined that proceeding at this time with controls beyond those included in the MWRA Long-Term CSO Control Plan would result in substantial and widespread social and economic impact as specified in 314 CMR 4.03(4), and that an extension to the CSO Variance is appropriate at this time. Issuing of the CSO Variance Extension in the Alewife Brook/Upper Mystic River watershed is consistent with EPA Guidance: *Coordinating CSO Long-Term Planning with Water Quality Standard Reviews (July 31, 2001)*, which asserts that longer term variances and renewal of variances are warranted given the extended duration necessary for implementation of LTCPs.

Determination to Extend Variance

DEP makes the following determinations:

- The MWRA CSO control plan for the Alewife Brook/Upper Mystic River, which includes projects to optimize sewer system performance and remove stormwater inflow through sewer separation, is responsive to the conditions and intent of the Variance and will achieve substantial CSO control benefits.

- MWRA has completed numerous analyses since the late 1980s evaluating alternatives for eliminating CSOs from the collection system tributary to the Deer Island Wastewater Treatment Plant. Among these are the 1997 FEIR, the April 30, 2001

Alewife Brook Notice of Project Change, and the July 2003 Alewife Brook and Upper Mystic River Final Variance Report. MWRA's revised LTCP incorporates all cost-effective and feasible CSO abatement projects for this watershed. At this point in time, it does not appear technically feasible to eliminate all CSO outfalls to this watershed given the engineering and infrastructure constraints in the MWRA interceptor system, headworks, conveyance tunnels, the Deer Island wastewater treatment plant, and the ocean outfall.

- Progress to date in implementing the LTCP for Alewife Brook and Upper Mystic River has greatly reduced CSO discharges to Alewife Brook, eliminated CSO discharges at several outfalls along Alewife Brook and Upper Mystic River, and improved treatment at MWRA's Somerville Marginal CSO Facility.

- Proceeding at this time with controls beyond those presently included in the revised LTCP would result in substantial and widespread social and economic impact as specified in 314 CMR 4.03(4). The cost of MWRA's CSO control program is substantial, at present included in MWRA's capital budget at $884.1 million. MWRA's detailed financial impact assessment considered the effect of expected sewer rate increases, and, appropriately, median household income as adjusted by the relatively high cost of housing in the Boston area. The MWRA adequately demonstrated that proceeding at this time with CSO controls necessary for full attainment of Class B water quality standards in the Alewife Brook/Upper Mystic River watershed would result in substantial and widespread economic and social impact.

DEP concludes that extension to the CSO Variance for the Alewife Brook/Upper Mystic River watershed is appropriate at this time, and extends the CSO Variance for MWRA, and the cities of Cambridge and Somerville to September 1, 2013. A determination on the highest feasible level of CSO control and associated water quality standard is deferred until the LTCP is implemented and the associated benefits are verified in 2020, in compliance with Schedule Seven.

Future Actions

(1) The Variance for CSO discharges to the Alewife Brook/Upper Mystic River Basin will be extended by a period not to exceed 3 years (September 1, 2013).

(2) MWRA and the City of Cambridge shall implement all elements of the LTCP as defined in the Second CSO Stipulation and in accordance with Schedule Seven.

(3) MWRA, the City of Cambridge, and the City of Somerville shall continue to implement the Nine Minimum Controls and report on CSO activations and volumes.

(4) MWRA shall continue to implement its receiving water monitoring in the Alewife Brook/Upper Mystic River Basin watershed and submit an annual summary report on or before July 15 of each year.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ECOSYSTEM PROTECTION
REGION I
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTION 301 AND 402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT.

DATE OF NOTICE: November 4, 2011

PERMIT NUMBER: **MA0101982**

PUBLIC NOTICE NUMBER: MA-004-11

NAME AND MAILING ADDRESS OF PERMITTEE:

City of Somerville
Department of Public Works
1 Franey Road
Somerville, Massachusetts 02145

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

2 Combined Sewer Overflows in Somerville

RECEIVING WATER: **Upper Mystic River and Alewife Brook**
USGS Hydrologic Code #01090001, Mystic River Watershed

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency, (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure that State Water Quality Standards and provisions of the Clean Water Act will be met. EPA has formally requested that the State certify this draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet or a statement of basis (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit conditions; and significant factual, legal and policy questions considered in preparing this draft permit) and the draft permit may be obtained at no cost at: http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

George Papadopoulos, US EPA
5 Post Office Square
Suite 100 (OEP 06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1579

The administrative record containing all documents relating to this draft permit is on file and may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **December 3, 2011**, to the U.S. EPA, George Papadopoulos, 5 Post Office Square, Suite 100, Mailcode OEP 06-1, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the MassDEP for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least forty five days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION AND APPEALS:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision any interested person may submit petition to the Environmental Appeals Board to reconsider or contest the final decision.

David Ferris, Director
MASACHUSETTS WASTE WATER PROGRAM
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Stephen S. Perkins, Director
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION AGENCY