# UNITED STATES DISTRICT COURT for the DISTRICT OF MASSACHUSETTS

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UNITED STATES OF AMERICA,	· ·
Plaintiff,	
v.	. CIVIL ACTION . No. 85-0489-RGS
METROPOLITAN DISTRICT COMMISSION, et al.,	· ·
Defendants.	•
	· ·
CONSERVATION LAW FOUNDATION OF NEW ENGLAND, INC.,	• • •
Plaintiff,	. CIVIL ACTION
v.	No. 83-1614-RGS
METROPOLITAN DISTRICT COMMISSION,	•
Defendants.	•

# MWRA QUARTERLY COMPLIANCE AND PROGRESS REPORT AS OF JUNE 13, 2008

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from March 15, 2008 to June 13, 2008 and supplementary compliance information in accordance with the Court's order of December 23, 1985 and subsequent orders of the Court.

### I. Schedule Seven.

A status report for the scheduled activities for the month of March 2008 on the Court's Schedule Seven, certified by Frederick A. Laskey, Executive Director of the Authority, is attached hereto as Exhibit "A."

### A. Activities Completed.

1. Combined Sewer Overflow Annual Report.

On March 14, 2008, the Authority submitted its Combined Sewer

Overflow ("CSO") Annual Progress Report in compliance with Schedule Seven.

### B. Progress Report.

- 1. Combined Sewer Overflow Program.
  - (a) North Dorchester Bay Storage Tunnel and Related Facilities.

The contractor for the North Dorchester Bay storage tunnel and related facilities temporarily stopped mining operations on April 11, 2008 to allow the supplier of the pre-cast concrete tunnel liner segments to keep pace with its high rate of tunneling advance and to perform necessary maintenance work on the tunnel boring machine. During this time, the contractor was also able to complete the emergency tunnel access shaft at Ticknor Street. Mining operations resumed on May 19, 2008. The contractor continues to make significant progress with the mining of the storage tunnel. Since last reporting,

the contractor mined an additional 3,557 feet, bringing the total to 7,121 feet, which is approximately 66 percent of the proposed 10,832-foot (2.1 mile) tunnel. The contractor also completed restoration work at Moakley Park, installation of a power cable at the site of CSO outfall BOS087 and the remote odor control facility, and the installation of the storm drain associated with the outfall BOS086 sewer separation work up to Logan Way.

In addition, during the week of May 6 through 9, 2008, the Authority had the opportunity to provide tours of the tunnel to almost 250 people, including the Honorable Richard G. Stearns and his clerks, United States Representative Stephen F. Lynch, and a number of local elected officials and labor leaders.

### (b) Interceptor Relief for BOS003-014.

Since last reporting, the Authority has continued to work with all of the stakeholders to develop contract documents and to obtain the necessary permits for the interceptor relief project for BOS003-014. This project consists of three construction contracts. The first of these contracts, which involved the rehabilitation of the main trunk line along Chelsea and Bremen Streets, was completed in 2005. The second contract involves the installation of approximately 2.5 miles of 36-inch, 48-inch, and 66-inch relief sewers along Border, Condor, East Eagle, and Chelsea Streets and along Marginal, Orleans and Bremen Streets primarily using microtunneling methods. The third contract involves replacing and upgrading approximately a mile of interceptors in upstream areas primarily using "pipebursting" methods, where a new pipe is

installed in the same location of an existing smaller pipe and pushed through breaking up the smaller pipe. Contracts two and three are more complex than typical sewer projects due to the methods of trenchless construction, which require specialty subcontractors and the use of three different-sized microtunneling machines in a variety of geotechnical conditions. As previously reported, the implementation of these two contracts is further complicated by the need for close coordination with various departments in the City of Boston and numerous private utilities as well as the density of the urban neighborhoods in which most of this work will be performed.<sup>1</sup>

Despite the difficult design and coordination challenges, the Authority was able to advertise contract two, with an estimated cost of \$62.3 million, which includes the microtunneling work, on May 10, 2008, with the goal of awarding the contract in June and issuing the Notice to Proceed by the end of June, in accordance with Schedule Seven. Potential bidders and subbidders have raised several geotechnical and contract questions and requested more time to review the documents and develop their bids. Because there are only a limited number of subcontractors in the country that specialize in this type of microtunneling, the Authority extended the bid period opening from June 19, 2008 to July 9, 2008 in order to give bidders more time to submit bids. The Authority is concerned that if it does not provide the bidders with more time in which to prepare their bids, it may receive no bids, which may result in a

See Combined Sewer Overflow ("CSO") Annual Progress Report dated March 14, 2008, pp. 27-30.

potential need to re-bid the project and cause significant delays. Although the Authority will be unable to issue the Notice to Proceed with construction by June 30 in compliance with Schedule Seven, it plans to award the contract at its summer Board of Directors meeting and issue the Notice to Proceed shortly thereafter.

(c) Brookline Connection, Cottage Farm Overflow Chamber Inter-Connection, and Cottage Farm Gate Control.

The Authority plans to issue the Notice to Proceed with the construction of the Brookline Connection, Cottage Farm Overflow Chamber Inter-Connection, and Cottage Farm Gate Control project, at a cost of \$1.9 million, by the end of this month in accordance with Schedule Seven. The project is intended to provide further reductions in treated discharges from the Cottage Farm CSO facility to the Charles River by directing flow away from Cottage Farm facility and conveying it to the Authority's Ward Street Headworks and by taking advantage of available in-system storage capacity upstream of the Cottage Farm CSO facility.

This construction project includes the work necessary to put into service the previously unutilized 54-inch Brookline Connection conduit, which crosses beneath the Charles River from the Cottage Farm influent chamber on the Cambridge side of the Charles River to a connection with the South Charles Relief Sewer on the Brookline side, so that more flow can be conveyed to the Ward Street Headworks. The project also includes the implementation of gate

controls and a control system that will optimize the operation of the existing Cottage Farm influent gates, the installation of an interconnection between the two overflow chambers outside the Cottage Farm facility, and the adjustment of the overflow weir settings within the chambers to increase in-system storage.

### Cambridge Sewer Separation. (d)

The Authority currently estimates that the five projects constituting the long-term CSO control plan for Alewife Brook have experienced a delay of at least 24 months due to the ongoing citizens' appeal of the Superseding Order of Conditions that was issued for the City of Cambridge Department of Public Works Cambridge Park Drive Drainage project (Contract 12) pursuant to the Wetlands Protection Act.<sup>2</sup> Although the appeals have not been resolved, the Authority and the City of Cambridge expect to finalize their negotiations on revisions to their CSO Memorandum of Understanding and Financial Assistance Agreement this month. Upon approval of the revisions by its Board of Directors, the Authority and the City of Cambridge plan to move forward with the design of Contract 12.

See Compliance and Progress Reports dated March 14, 2008, pp. 4-5; December 14, 2007, pp. 5-6; September 14, 2007, pp. 2-3; June 15, 2007, pp. 8-9; March 15, 2007, pp. 5-6; December 15, 2006, pp. 9-10; September 15, 2006, pp. 6-7; June 15, 2006, pp. 6-7; March 15, 2006, pp. 5-6; December 15, 2005, pp. 6-7; September 15, 2005, pp. 8-9; June 15, 2005, pp. 10-11; December 15, 2004, pp. 10-12; and September 15, 2004, pp. 6-7 for previous reports on the wetland permitting issue.

In a related matter, the Authority was notified by the United States Environmental Protection Agency ("EPA") that, on May 15, 2008, an Arlington resident submitted a notice of intent to file a Clean Water Act citizen's suit against EPA for issues related to the three-year variance extension for the Alewife Brook/Upper Mystic River issued in September 2007. EPA has sixty days to address these issues before the citizen suit can be filed. A copy of the Notice of Intent is attached as Exhibit "B."

The issuance of variance extensions for the Alewife Brook/Upper Mystic River through 2020 is an integral part of the Authority's March 2006 agreement with the United States and the Massachusetts Department of Environmental Protection ("DEP") on its long-term CSO control plan for the Alewife Brook/Upper Mystic River watersheds because it provides the Authority with the ability to maintain more certainty in managing its capital program and rate increases while implementing what had become, in part through the negotiations, a larger and more expensive long-term CSO control plan. Currently, Alewife Brook is designated as a Class B receiving water, which does not allow CSO discharges. The CSO variance from the Class B designation authorizes CSO discharges from CSO outfalls permitted to the cities of Cambridge and Somerville and the Authority.

### (e) Prison Point CSO Treatment Facility Optimization.

On April 23, 2008, the Authority sent a letter to the EPA and DEP confirming the implementation and performance of improved operational procedures for the Prison Point CSO treatment facility. The Authority confirmed it had fully implemented the operational procedures that it recommended a year earlier to minimize treated discharges from the facility (outfall MWR203) to Boston Inner Harbor. The Authority also verified that the predicted hydraulic performance of the facility with the new procedures would lower treated discharges in a typical rainfall year from 30 activations and 335 million gallons to 17 activations and 243 million gallons. On April 30, 2008, the Authority filed a motion with the Court to modify the long-term level of control for the Prison Point CSO facility (outfall MWR203) by including the updated treated discharge activation and volume numbers. The motion was allowed by the Court on May 7, 2008.

### (f) <u>Dorchester Brook Conduit.</u>

In October 2007, Boston Water and Sewer Commission ("BWSC") completed a detailed study of its Lower Dorchester Brook Sewer ("LDBS"). The LDBS conveys flows from approximately 900 acres in North Dorchester and lower Roxbury and connects to BWSC's New Boston Main Interceptor ("NBMI") at CSO regulator RE070/11-2, one of the nine regulators that can direct CSO to the Dorchester Brook Conduit ("DBC"). The NBMI in turn conveys flows to the Authority's Columbus Park Headworks in South Boston.

Results of BWSC's study show that the LDBS and its connection to the NBMI at regulator RE070/11-2, as well as other hydraulically related regulators, contribute more overflow to the DBC than estimated in 2002. The primary cause of the discrepancy is storm drain systems tributary to the LDBS that were assumed in the Authority's earlier modeling to drain to the DBC and Fort Point Channel but in fact tie back into the BWSC sewer system.

To make CSO discharges to the DBC consistent with the long-term level of control, BWSC proposed several measures and a sharing of cost whereby the Authority will fund BWSC's implementation of two initial measures. The first measure is to relocate regulator RE070/11-2 further upstream along the LDBS to a proposed connection with BWSC's (old) Boston Main Interceptor. Relocating the regulator further upstream will allow already separate stormwater from a 250-acre area to be removed from the sewer system. The second measure to be funded by the Authority is the diversion of already separate stormwater from an additional 25-acre area away from the sewer system. At its June 4 meeting, the Authority's Board of Directors approved an amendment to the Authority's Memorandum of Understanding and Financial Assistance Agreement with BWSC that will include \$2,030,000 for this additional work. Once the two measures funded by the Authority are completed, BWSC has proposed to reevaluate system performance and determine the extent of additional work that may be necessary to bring CSO discharges to the DBC in line with the long-term level of control. Additional

work, if necessary, will be completed by BWSC with its own funds and may involve additional sewer separation and/or hydraulic relief.

### (g) <u>Bulfinch Triangle Sewer Separation</u>.

BWSC completed final design of the Bulfinch Triangle Sewer Separation project and advertised the construction contract on May 14, 2008. BWSC expects to receive construction bids on June 26, 2008 and issue the Notice to Proceed prior to the November 2008 milestone in Schedule Seven. The cost of the project (design and construction) has greatly increased. BWSC's latest cost estimate is \$10.2 million, which is \$5.5 million more than the \$4.7 million budget in the Authority's proposed Fiscal Year 2009 Capital Improvement Plan.

The goal of the Bulfinch Triangle sewer separation project is to minimize CSO discharges to the Charles River by separating combined sewer systems in the area of Boston roughly bounded by North Station, Haymarket Station, North Washington Street, and Cambridge Street. The recommended sewer separation plan is intended to reduce the number of overflows to the Charles River, reduce overflows to the Prison Point CSO facility and close outfall BOS049.

### (h) Quarterly CSO Progress Report.

In accordance with Schedule Seven, the Authority submits as Exhibit "C" its Quarterly CSO Progress Report (the "quarterly report"). The quarterly report summarizes progress made in design and construction on the CSO projects

during the past quarter and identifies issues that do or may affect compliance with Schedule Seven.

### II. EPA Clean Water Act Enforcement Matter.

As part of a negotiated settlement of a claim asserted by the United States that certain past operational practices at the Deer Island Treatment Plant were not consistent with the Authority's NPDES permit, the Authority has agreed to perform three Supplemental Environmental Projects (the "SEPs"): clean up of debris in the Neponset River, the Belle Island Inlet, the Mystic River, the Malden River, the Fore River, the Town River Bay, the Chelsea River and the Charles River; purchase of a pump-out boat for the City of Boston to permit Boston Harbor to be designated a no discharge zone; and funding of installation of low-flow toilets by our member communities. The settlement has not been formalized because the Department of Justice ("DOJ") has yet to determine how to deal with legal technicalities governing its implementation. However, because it did not anticipate these technical problems and because it wished to realize associated environmental benefits during the current summer season, the Authority already has moved forward with two of the three SEPs -the debris clean up and the purchase of the pump-out boat. The contractor has begun the debris clean up in the Mystic River, and the pump-out boat has been ordered and is scheduled for delivery in July. The low-flow toilet initiative

is not tied to the summer season, so the Authority will implement that program when DOJ determines how to finalize the agreement.

By its attorneys,

/s/ John M. Stevens

John M. Stevens (BBO No. 480140) Jonathan M. Ettinger (BBO No. 552136) Foley Hoag LLP 155 Seaport Boulevard Boston, Massachusetts 02210 (617) 832-1000 istevens@foleyhoag.com

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### CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of this document, which was filed via the Court's ECF system, will be sent electronically by the ECF system to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants on June 13, 2008.

/s/ John M. Stevens John M. Stevens (BBO No. 480140) jstevens@foleyhoag.com

Dated:

June 13, 2008

B3513712.2

# SCHEDULE SEVEN

# MWRA MONTHLY COMPLIANCE REPORT

March 2008

CSO CONTROL

MONTH/YEAR

EXHIBIT "A"

LONG-TERM SLUDGE MANAGEMENT

NEW BOSTON HARBOR SECONDARY TREATMENT PLANT

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

March 2008

(Completed March 14, 2008)

Exhibit A

Certification of Completed Activities

Bý:

Frederick A. Laskey / Executive Director, MWRA

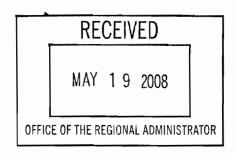
Date:

June 13, 2008

Mr. Robert Varney, Regional Administrator USEPA REGION 1 1 Congress Street Suite 1100 Mail Code: RAA Boston, MA 02114-2023

Date: May 15, 2008

Dear Regional Administrator Varney:



Attached is a NOTICE OF INTENT TO SUE. You are receiving this notice pursuant to 40 CFR §135.2(3), which requires that prior to commencing a Clean Water Act citizen suit against a federal agency "notice shall be mailed to ...the Regional Administrator of the Environmental Protection Agency for the region in which such violation has occurred." If you have any questions about this matter please feel free to contact me.

Sincerely,

Mr. David Stoff 88 Fairmont Street Arlington, MA 02474 (781) 643-4311 DSTOFF@RCN.COM

DAVIM STORK

### NOTICE OF INTENT TO SUE

### Certified Mail / Return Receipt Requested

**DATE: May 15, 2008** 

Mr. Stephen L. Johnson, Administrator U.S. Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Mail Code 1101A Washington, D.C. 20460

Mr. Robert Varney, Regional Administrator USEPA REGION 1 1 Congress Street Suite 1100 Mail Code: RAA Boston, MA 02114-2023

RE: Notice of intent to file a Clean Water Act citizen suit for failure to perform nondiscretionary duties pursuant to sections 303 and 402 of the Clean Water Act.

Dear Administrator Johnson and Regional Administrator Varney,

This notice is provided to you pursuant to section 505(b)(2) of the Federal Water Pollution Control Act ("Clean Water Act," "CWA," or the "Act"). The Clean Water Act requires that sixty days prior to commencing a citizen suit in federal court the plaintiff shall give notice of the action to the Administrator of United States of the Environmental Protection Agency ("EPA," the "Agency"). This notice is given by Mr. David Stoff, a resident of Arlington, Massachusetts, who will act as counsel in this case.

This notice concerns EPA's failure to review a variance from Massachusetts surface water quality standards for Combined Sewer Overflow ("CSO")<sup>1</sup> discharges to the Alewife Brook and the upper portion of the Mystic River, two tributaries of Boston Harbor ("Alewife Brook/Mystic River variance"). The notice also concerns EPA's failure to conform the Alewife Brook/Mystic River variance to the requirements of section 402(q) of the Clean Water Act when the Massachusetts Department of Environmental Protection ("MassDEP") failed to do so.

The violations described in this notice continue to degrade the condition of the Alewife Brook and Mystic River; curtailing the existing uses of those waters, and exacerbating nuisance-like conditions. The water quality-based treatment measures that are the subject of Part II of this notice would provide a cost-effective remedy for some of the problems degrading these waters by focusing efforts on areas where existing controls are ineffective.

### Clean Water Act

Congress enacted the Clean Water Act to "restore and maintain" the Nation's waters, with an interim goal of water quality that protects fish and wildlife and supports water-based recreation (*i.e.* the fishable /swimmable goal). To accomplish these goals the Act requires that pollutant discharges (*i.e.* point sources) be treated with appropriate control technology, with the ultimate goal of eliminating pollutant discharges to the Nation's waters. CWA sec. 301; CWA sec. 101.

Congress recognized that even with a federally mandated system of technology-based controls in place the neglect of the Nation's waters might necessitate further efforts if the goals of the Clean Water Act were to be realized. Therefore, Congress chose to retain the prior system of ambient water quality regulation ("water quality standards") to serve as a backstop for the new system of technology-based controls.

Water quality standards serve a dual purpose under the Act. Water quality standards are the yardstick by which the effectiveness of the technology-based treatment

<sup>&</sup>lt;sup>1</sup> CSOs consist of mixtures of domestic sewage, industrial and commercial wastewaters, and storm water runoff. CSOs often contain high levels of suspended solids, pathogenic microorganisms, toxic pollutants, floatables, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants.

requirements of CWA sec. 301 are measured; they also serve as goals for long term planning efforts by the states and the basis for water quality-based treatments to control both point and non-point sources of pollution.

Section 303(d) of the Act requires states to identify areas where technology-based controls (i.e. effluent limitations on point sources imposed by CWA sec. 301) are insufficient to meet the designated uses and numerical criteria imposed by state water quality standards. In such waters states must determine the maximum amount of a particular pollutant a waterbody can tolerate and apportion that "load" between various sources. This calculation, known as a Total Maximum Daily Load ("TMDL"), is then incorporated into CWA permits and a state's Continuing Planning Process, which, ultimately, result in the attainment of water quality standards and restoration of the Nation's waters-the Clean Water Act's goal.

### I. Statutory Requirements for Review and Approval of State Water Quality Standards

Pursuant to the Clean Water Act states must hold public hearings to review, and where necessary modify and adopt, their water quality standards every three years. CWA sec. 303(c)(1). Whenever a state revises a standard or adopts a new one, that standard must be submitted to EPA for approval. CWA sec. 303(c)(2)(A); 40 CFR 131.20(c).

EPA must notify the state within sixty days if the state submission meets the requirements of the Act; thereafter the standard becomes the applicable water quality standard for purposes of the Act. CWA sec. 303 (c)(3); 40 CFR 131.21(a)(1). If EPA determines the standard is inconsistent with the Act, it must notify the state of required changes within ninety days. CWA sec. 303(c)(3); 40 CFR 131.21(a)(2). Should the state fail to adopt the change(s) within ninety days, EPA is required to "promptly" prepare a new standard for the state. CWA sec. 303(c)(4)(A). If the state has not cured defects in its standard within an additional ninety day period, the standard proposed by EPA becomes the applicable water quality standard for Clean Water Act purposes.

EPA may also, in its discretion, establish a water quality standard wherever the Administrator determines that a new or revised standard is necessary to meet the requirements of the Act. CWA sec.303(c)(4)(B).

### Background: Alewife Brook/ Mystic River variance

The original Alewife Brook/ Mystic River variance was issued by MassDEP on March 5, 1999, for CSO discharges permitted to the Massachusetts Water Resource Authority ("MWRA") and the cities of Cambridge and Somerville, Massachusetts. The variance was a three-year modification of the existing class B water quality standard (*i.e.* the fishable/swimmable standard) promulgated by MassDEP.

The variance allowed limited CSO discharges, while requiring the implementation of court ordered <sup>2</sup> CSO controls included in the MWRA's *Final CSO Facilities Plan and Environmental Impact Report*, dated July 31, 1997.

Both MassDEP and EPA recognized that the original Alewife Brook/ Mystic River variance was based on the need to gather additional information to properly assess pollutant loads in the watershed. Both concurred that the Alewife Brook/ Mystic River variance was not a not a permanent change in the class B water quality standard because it was not supported by a formal Use Attainability Analysis. <sup>3</sup> The Alewife Brook/Mystic River variance was subsequently extended, with EPA approval, from May 5, 2002, to September 5, 2003; and, from October 1, 2003, until September 1, 2004.

On September 15, 2005, Linda Murphy, EPA's Director of the Office of Ecosystem Protection for Region 1, approved MassDEP's request to extend of the Alewife Brook/Mystic River variance from September 1, 2004 to September 1, 2007. The approval was based on CSO control analyses performed by the MWRA,<sup>4</sup> and MassDEP's finding that proceeding with CSO controls necessary for full attainment of the class B water quality standard would result in "substantial and widespread economic and social

<sup>&</sup>lt;sup>2</sup> United State District Court for the District of Massachusetts, Civil Actions Nos. 85-0489 and 83-1614-MA, Schedule Six.

<sup>&</sup>lt;sup>3</sup> A Use Attainability Analysis (UAA) is a structured scientific assessment of the factors affecting the attainment of uses specified in Section 101(a)(2) of the Clean Water Act (the so called "fishable/swimmable" uses).

The water quality standard for the Alewife Brook and upper portion of the Mystic River was not modified by EPA's February 27, 1998, UAA for CSO impacted waters because it was subject to a state issued water quality variance. *See*, February 27, 1998 letter from John P. DeVillars, EPA Regional Administrator, to David B. Struhs, Commissioner, MassDep; December 31, 1997 letter from Arleen O'Donnell MassDep to Ron Manfredonia, EPA Associate Director for Water Quality Policy.

<sup>&</sup>lt;sup>4</sup> These include the 1997 Combined Sewer Overflow Facilities Plan and Environmental Impact Report, the 2001 Notice of Project Change for the Long-Term CSO Control Plan for Alewife Brook and the Cottage Farm CSO Facility Assessment Report (for the Charles River).

harm." EPA agreed that it was "not feasible to fully attain the Massachusetts class B water quality standard within the 3-year term of the variance." (emphasis added)

On March 13, 2006, Glen Haas, MassDEP's Acting Assistant Commissioner of the Bureau of Resource Protection, sent a memorandum to EPA outlining MassDEP's approach to future variances from state water quality standards for CSO discharges by the MWRA (the "multi-year variance request"). The multi-year variance request references a March 3, 2006, MassDEP memorandum concurring with a significant regulatory finding by EPA: that further spending on the MWRA's long-term CSO control plan would cause "substantial widespread economic and social harm" to certain cities in the MWRA service area until at least 2020. (emphasis added)

On March 14, 2006, Linda Murphy replied to Glen Haas with a letter titled *Approval* of Charles River and Alewife Brook/Mystic River Variances ("2006 variance approval")(Attachment 1). EPA's 2006 variance approval states that:

In accordance with Section 303(c)(2) of the Clean Water Act and 40 CFR Part 131, <u>I hereby approve MassDEP's resubmitted variances</u>, including reissuance of the variances in increments of no more than three years with respect to MWRA through the year 2020, subject to the following conditions established by MassDEP. (emphasis added)

The conditions proposed by MassDEP included state review of subsequent variances for new information every three years, compliance with "Schedule Seven," the revised U.S. District Court order implementing the regional MWRA Long-Term CSO Control Plan,<sup>5</sup> and "adjustments" in the case of impacts outside of the expected range.

On August 30, 2007, MassDEP issued the *Final Determination to Extend Variance for Combined Sewer Overflow Discharges to Alewife Brook/Upper Mystic River* (the "variance determination," "2007 variance") which extended the variance a period of three years, until September 1, 2010. The variance determination was issued after public notice and a public hearing, and after MassDEP had responded to public comments.

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<sup>&</sup>lt;sup>5</sup> See, note 2 above.

The variance determination to was based on technical and cost information that had been provided by MWRA up until 2003, and "affordability analyses demonstrating that implementation of more stringent CSO controls at this time would result in substantial and widespread social and economic impact." It did not refer to EPA's 2006 multi-year variance approval.

The variance determination, *Response to Public Comments*, and *Fact Sheet* were all posted on MassDEP's website.<sup>7</sup> Physical copies of the variance determination were mailed to officials at EPA Region 1. <sup>8</sup>

### EPA's Duty to Review MassDEP's 2007 variance.

The Clean Water Act requires states to hold a public hearing to review water quality standards at least once every three years. CWA sec.303(c)(1). The Act also provides that when a state revises a water quality standard "such revised standards shall be submitted to [EPA]." CWA sec. 303(c)(2). EPA regulations define a water quality variance as a revision of the underlying water quality standard. 40 CFR §131.20; 65 FR 24649, April 27, 2000.

CWA sec. 303(c)(3) provides that within sixty days of submission of a <u>revised</u> water quality standard EPA must notify the state of approval, or provide notice of the changes necessary to bring the standard into compliance with the Act within ninety days. CWA sec. 303(c)(3); 40 CFR 131.21(a)(2).

MassDEP issued the 2007 variance pursuant to state regulations (*i.e.* 314 CMR 4.0) on August 30, 2007. The sixty day period for EPA approval of the 2007 variance lapsed on October 30, 2007. The ninety day period for EPA to provide notice that

<sup>&</sup>lt;sup>6</sup> MassDEP names one subsequent analysis in the 2007 variance Fact Sheet, page 11. The 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. This may be the same "report of Professor Stavins and his associates" submitted by MWRA to EPA and MassDEP on December 7, 2004, included as exhibit B in the MWRA December 15, 2004, Quarterly Compliance Report to the US District Court. The 2004 variance determination does not refer to the Stavins report. The 2004 variance Fact Sheet, pg.5, refers to additional information presented by MWRA about the cost of housing in the Boston area, but does not cite the Stavins report. Massachusetts water quality standards did not incorporate the use of such analysis to support granting a variance until December 29, 2006. 314 CMR sec. 4.03(4)(f).

<sup>&</sup>lt;sup>7</sup> (http://www.mass.gov/dep/water/wastewater/sewersys.htm)

<sup>&</sup>lt;sup>8</sup> CSO Coordinator Todd Borci, William Beckwith, Water Quality Standards Coordinator, and Michael Wagner, General Counsel, on August 30, 2007.

changes were necessary lapsed on November 30, 2007. As of the date of this notice, EPA has yet to take <u>any</u> administrative action regarding the 2007 variance.

MassDEP submitted copies of the 2007 variance to officials at EPA on August 30, 2007. MassDEP posted the relevant variance documents on the worldwide web. EPA cannot deny it has actual notice of the 2007 variance; nor that the results of the state review are unavailable. As per CWA sec.303(c)(1) MassDEP has certainly made the "results" of its 2007 variance review available to EPA.

EPA's failure to review the 2007 variance, a revised water quality standard subject to the requirements of CWA sec. 303(c)(2), is a violation of a mandatory duty pursuant to section 303(c)(3) of the Clean Water Act. Nothing in the Clean Water Act authorizes EPA to pre-approve a state water quality standard, as the 2006 variance approval purports to do. The five consecutive three-year variances authorized by EPA in 2006 are a violation of the Clean Water Act because CWA sec. 303(c)(3) requires EPA to make a determination about consistency with Clean Water Act requirements within 60 days "after the date of submission" of a revised water quality standard. Neither the 2007 variance, nor any of the future variances, could be "submitted" to EPA until after the public hearing required by CWA sec. 303(c)(1) has occurred.

The Alewife Brook and upper Mystic River are designated as class B waters. A variance is necessary because CSO discharges violate that standard. Variances are a revision of the existing standard, not a substitution for it. In all prior variances this interpretation was operative; and indeed it is the rationale offered by the EPA. See, 40 CFR §131.20; 65 FR 24649, April 27, 2000.

The requirements of the Act are unambiguous: when a state revises a water quality standard "such revised standards shall be submitted to [EPA]." CWA 303(c)(2). In turn, EPA must determine that the revised standard meets the requirements of the Act "within sixty days after the date of submission," or provide notice of the defects in the standard to the state within 90 days. CWA sec. 303(c)(3).

As the Alewife Brook/ Mystic River variance is to be reissued until 2020, the violations described above, and the harms that follow, are likely to reoccur.

### II. Statutory Requirements for Combined Sewer Overflows

CSOs are point sources, subject to technology-based effluent limitations required by CWA sec. 301(b)(1)(A), and water quality-based limitations required by CWA sec. 301(b)(1)(C). Congress amended section 402 of the Clean Water Act <sup>9</sup> in 2000 to clarify the required treatment level for CSO discharges. Section 402(q) of the Clean Water Act [33 U.S.C. sec. 1342(q)] requires that "each permit, order, or decree" for a discharge from a municipal combined storm and sanitary sewer "shall conform" to the Combined Sewer Overflow Control Policy ("CSO Policy") signed by the Administrator [of EPA] on April 11, 1994.

The CSO Policy provides minimum standards for compliance with technologybased effluent limitations (i.e. the Nine Minimum Controls), and a requirement to develop a long-term CSO control plan that ensures compliance with the water qualitybased provisions of the Clean Water Act. The CSO Policy also contains information about "appropriate" revisions of water quality standards. CSO Policy, Part II(B)-(C).

Pursuant to the CSO Policy, CSO permittees develop and implement a long-term CSO control plan using either the "presumption approach" or the "demonstration approach." CSO Policy, Part II(C)(4)(a)-(b).

The "presumption approach" provides program criteria presumed to be adequate to meet the water quality- based requirements of the Act. This includes limits on the annual number of overflows, 10 or the elimination of 85% of combined sewage collected during storms, or elimination of the mass of pollutants causing water quality impairment. Where CSOs remain after the implementation of the plan, the discharges receive minimum treatment including primary clarification, disposal of floatables, and disinfection. CSO Policy, Part II(C)(4)(a).

The "demonstration approach" requires that permittees demonstrate that selected controls are adequate to meet the water quality-based requirements of the Act. The CSO Policy sets specific conditions for a "successful demonstration." CSO Policy, Part II(C)(4)(b). (Attachment 2) The permittee must demonstrate that CSO controls are adequate to meet water quality standards, unless pollution sources other than CSO

<sup>10</sup> Four overflows per year, with an additional two overflow events at the discretion of the permitting authority.

prevent this. Where CSO discharges remain after implementation of the planned control program they must not "preclude" attainment of water quality standards. If the remaining CSO discharges cannot meet water quality standards because of pollution sources other than CSOs, a "total maximum daily load" is required to "apportion" pollutant loads (the "CSO Policy's TMDL requirement"). CSO Policy, Part II(C)(4)(b)(i)-(ii).

### Background: Alewife Brook Long-Term CSO Control Plan

The MWRA chose to develop CSO controls for the Alewife Brook using the "demonstration approach." <sup>11</sup> On July 1, 2003, the MWRA submitted the *Final Variance Report for the Alewife Brook and Upper Mystic River* ("*Final Variance Report*") for approval by MassDEP and EPA. The *Final Variance Report* provided detailed technical and financial analysis to support the implementation of long-term CSO controls. The performance of a range of CSO control alternatives was analyzed by plotting the cost of various control alternatives versus the pollutant load reduction, as a percentage of a baseline pollutant load.

Among the pollutant loads analyzed in the *Final Variance Report* were fecal coliform bacteria ("pathogens"), total suspended solids ("TSS"), and biochemical oxygen demand ("BOD"). <sup>12</sup> Based on this analysis, MassDEP approved the "Revised Recommended Plan" to control CSOs in the Alewife Brook. The MWRA reported that additional CSO controls would not provide meaningful water quality improvement, primarily due to the predominance of non-CSO pollution sources. <sup>13</sup>

In April 2006, the United States District Court amended the order for implementation of the regional MWRA Long-Term CSO Control Plan. <sup>14</sup> The Revised Recommended Plan, which is included in the court order, calls for partial separation of combined sewer areas tributary to the Alewife Brook and increasing the hydraulic capacity of certain interceptor sewer connections. The plan is predicted to reduce annual

<sup>&</sup>lt;sup>11</sup> Notice of Project Change for the Long-Term CSO Control Plan for Alewife Brook, EOEA no. 10335, April 30, 2001, page 2-3; Response to Public Comments on the Notice of Project Change for the Long-Term CSO Control Plan for Alewife Brook, EOEA no. 10335, May 2003, page 4-7.

<sup>&</sup>lt;sup>12</sup> Final Variance Report, page 5-40, table 5-24, page 6-3.

<sup>&</sup>lt;sup>13</sup> Tentative Determination to Approve CSO Variance for Alewife Brook/Upper Mystic River, Fact Sheet, page 3, August 2007.

<sup>&</sup>lt;sup>14</sup> Schedule Seven, See, footnote 5 above.

CSO volume to Alewife Brook 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.

After completion of the Revised Recommended Plan, six CSOs <sup>15</sup> will continue to discharge into Alewife Brook without disinfection or treatment (*i.e.* the discharges would not meet presumption approach criteria). The remaining Alewife Brook CSOs will discharge about 8 million gallons of sewage annually.

### II. EPA's Duty to Conform the Alewife Brook/Mystic River Variance with CWA section 402(q)

CWA sec. 402(q) requires that "each permit, order, or decree" for CSO discharges "shall conform" to the *CSO Policy*. The 2007 variance "authorizes limited CSO discharges," and is an "order," as that term is defined in the Administrative Procedures Act, because EPA approval of a revised state water quality standard is a final disposition. There is no administrative remedy within the Agency for the approval, or disapproval, of a state water quality standard.

The CSO Policy contains duties that are enforceable pursuant to CWA sec. 402(q). For example, the evaluation of alternatives using either the demonstration or presumption approach, is one of the "minimum elements" that is required in the development of a long-term CSO control plan. CSO Policy, Part II(C). The CSO Policy lists criteria for a successful demonstration; one that is "adequate to meet the water quality-based requirements of the CWA." The failure to meet these criteria would result in an unsuccessful demonstration; a demonstration which by definition is inadequate to meet the requirements of the Act. The listed criteria include the requirement for a TMDL under certain conditions. See, CSO Policy, Part II(C)(4)(b)(i)-(ii).

The CSO Policy only requires a TMDL for demonstration approach CSO control plans where non-CSO pollution sources prevent the planned controls from meeting water quality standards <u>and</u> CSO discharges remaining after implementation of planned controls are precluded from attaining those standards because of pollution sources other than CSOs *Id*.

<sup>&</sup>lt;sup>15</sup> These include outfalls CAM 001, CAM 002, MWRA 003, CAM401A, CAM 401B and SOM001A. Two CSOs will discharge to the Upper Mystic River: SOM 007A/MWRA205A and SOM007.

<sup>&</sup>lt;sup>16</sup> An order is the "whole or part of a final disposition...of an agency in a matter other than rulemaking" Administrative Procedures Act, 5 U.S.C. sec.551(6).

The *Fact Sheet* for the 2007 variance cites MWRA's conclusion about the adequacy of planned CSO controls:

CSO controls beyond those included in [the Revised Recommended Plan] would not be cost-effective and would not provide meaningful water quality improvement.

Six CSO outfalls on Alewife Brook will remain open after the Revised Recommended Plan is implemented. A TMDL would be unnecessary if the permittee could demonstrate that the remaining CSO discharges would not preclude attainment of water quality standards (i.e. meet water quality standards in the absence of the non-CSO pollutant load). The MWRA *Final Variance Report* notes that:

With the recommended plan in place, CSOs will not preclude the attainment of the class B water quality criteria 98.5% of the time on average.

Final Variance Report, page ES-4. Unfortunately 98.5% is not 100%. However the MWRA was able to demonstrate that the Revised Recommended Plan could be implemented because the CSO Policy allows a permittee to demonstrate that the remaining CSO discharges cannot meet water quality standards because of pollution sources other than CSOs. CSO Policy, Part II(C)(4)(b)(ii). The Final Variance Report notes that:

[H]igher levels of CSO control... would have no impact on the magnitude or duration of the extensive non-CSO impacts to the Alewife Brook and Upper Mystic River.

Final Variance Report, page ES-5. And finally:

Elimination of CSO[s] by sewer separation would mean that CSOs would no longer contribute to the exceedance of the class B water quality criteria in Alewife Brook...Even if the additional stormwater discharge from sewer separation could in some way be treated...the remaining untreated stormwater from Belmont and Arlington would continue to cause exceedances of the class B [water quality standard] criteria.

Final Variance Report, pages 7-13, 7-14.

The CSO Policy stipulates that where the CSO discharges remaining after the implementation of the long-term control plan cannot meet water quality standards due to non-CSO pollution sources a "total maximum daily load" should be used to "apportion" pollutant loads . CSO Policy, Part II(C)(4)(b)(ii). Therefore a TMDL is required for implementation of the Revised Recommended Plan.

Permittees do not establish TMDLs. States are required to identify waters where technology-based controls are not stringent enough to meet water-quality standards, prioritize them based on severity of pollution and uses, then establish a TMDL based on the priority ranking. CWA sec. 303(d).

The CSO Policy's TMDL requirement modifies the requirement to establish a TMDL based upon priority ranking (i.e. CWA sec. 303(d)(1)(C)) because CWA sec. 402(q) mandates compliance with the CSO Policy by December 21, 2000. A long-term CSO control plan is a non-discretionary requirement of the CSO Policy and that plan "must comply with sections 301(b)(1)(c) and 402(a) of the CWA." CSO Policy, Part III(A). Therefore the long-term control plan must include "any more stringent limitation, including those necessary to meet water quality standards...established pursuant to any State law." CWA sec. 301(b)(1)(C). This would include a TMDL.

Establishment of a TMDL, if required by a demonstration pursuant to Part II(C)(4)(b)(i)-(ii) of the CSO Policy, must coincide with the compliance schedule implementing the long-term CSO control plan in the NPDES permit. Were it otherwise, the NPDES permit to violate CWA sec. 402(a)(1) because that section conditions authorization of the permit on compliance with CWA sec. 301.<sup>17</sup>

Implementation of the Revised Recommended Plan is required by NPDES permits for Cambridge, Somerville and the MWRA, the Alewife Brook/ Mystic River variance, and Schedule Seven. Pursuant to Schedule Seven construction of projects identified in the Revised Recommended Plan will be complete by January 2013.

MassDEP has promulgated a pathogen TMDL for Boston Harbor<sup>18</sup> that includes Alewife

<sup>&</sup>lt;sup>17</sup> See, 40 C.F.R. § 122.44(d)(1)(vii)(B) (requiring permitting authority to set effluent limits "consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA..."). See also, Friends of Earth, Inc. v. E.P.A., 446 F.3d 140,144 (D.C. Cir., 2006)(Holding that "the word 'daily' means daily" in a TMDL; and describing how such TMDLs must be incorporated into permits pursuant to CWA 301(b)(1)(C)).

http://www.mass.gov/dep/water/resources/bharborl.pdf

Brook and Mystic River; however EPA was unable to approve it. The section titled *Other Priorities to Ensure Continued Progress* in the 2007 variance *Fact Sheet* contains no discussion about establishing TMDLs for the TSS or BOD pollutant loads MWRA analyzed when selecting the CSO controls adopted in the Revised Recommended Plan. Indeed, it contains no discussion of TMDLs at all.

MassDEP's failure to establish TMDLs for the pollutants TSS, BOD, and to revise the pathogen TMDL, so that it can be approved by EPA, means that the Alewife Brook/Mystic River variance does not comply with the requirements of Part II(C)(4)(b)(ii) of the CSO Policy. Since CWA sec. 402(q) requires that "orders" "shall conform" to the CSO Policy, EPA approval of the Alewife Brook/Mystic River variance without the required TMDLs is a violation of a nondiscretionary duty under the Clean Water Act. CWA sec. 505(a)(2).

### **IDENTIFICATION OF THE PARTIES AND COUNSEL:**

The Defendants are EPA Administrator Stephen Johnson and Regional Administrator Robert Varney. EPA Administrator Johnson is charged with overall control of the United States Environmental Protection Agency. Robert Varney is the Administrator of EPA Region 1 charged with control of, and operational authority over, the Agency actions described above.

Mr. David Stoff (the "Plaintiff") is a natural person residing at 88 Fairmont Street, Arlington, Massachusetts. Mr. Stoff is an attorney, licensed in Massachusetts and certified to appear before the United States District Court, District of Massachusetts. Mr. Stoff will act as counsel in this case. Any correspondence may be directed to:

Mr. David Stoff 88 Fairmont Street Arlington, MA 02474 (781) 643-4311 DSTOFF@RCN.COM

Plaintiff alleges that continued discharges of raw sewage authorized by the Alewife Brook/Mystic River variance caused him actual harm because he forgoes use of portions of his abutting property, which is periodically inundated by the Alewife Brook, because of concerns of sewage contamination.

Plaintiff believes that implementation of an effective water quality-based pollution control strategy would reduce the pollutant load of the Alewife Brook thereby simplifying the maintenance of his property and would also mitigate the odors and other nuisance-like conditions caused by the Alewife Brook that affect Plaintiff's property.

Plaintiff uses the Alewife Brook for recreational purposes including fishing and canoeing, and often walks the shore of the Alewife Brook, even during periods of wet weather. Plaintiff forgoes in-stream use of the Alewife Brook during wet-weather out of concern that contact with raw sewage would make him ill; but would use the Alewife Brook more frequently it its sanitary condition were improved.

### CONCLUSION

If the violations described above are not corrected within 60 days, so that it is absolutely clear that there is no reasonable likelihood they will recur, Plaintiff intends to file suit on his own behalf seeking civil declaratory judgments, injunctive relief, attorney's fees and litigation costs as provided in the Clean Water Act.

Plaintiff reserves the right to include in his complaint allegations of any additional violations not heretofore included in this 60-day letter. Furthermore, this letter does not preclude the Plaintiff from bringing suit for violations under other statutes, such as the Administrative Procedures Act, to sue for other violations connected with the acts described above.

Plaintiff believes that this Notice Letter complies with the requirements of section 505 of the Clean Water Act and 40 CFR sec. 135.2. If you would like to discuss this matter further, please feel free to telephone and set up a meeting.

Respectfully,

Mr. David Stoff 88 Fairmont Street Arlington, MA 02474 (781) 643-4311

DSTOFF@RCN.COM

### **Service List**

Commissioner Laurie Burt Massachusetts Department of Environmental Protection One Winter Street Boston, MA 02108

Mr. Stephen L. Johnson, Administrator U.S. Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Mail Code 1101A Washington, D.C. 20460

Attorney General Michael B. Mukasey U.S. Department of Justice 950 Pennsylvania Avenue, NW Washington, DC 20530-0001

Mr. Robert Varney, Regional Administrator USEPA REGION 1 1 Congress Street Suite 1100 Mail Code: RAA Boston, MA 02114-2023

### CC:

Kevin Brander
MassDEP Northeast Region
205B Lowell Street
Wilmington, Massachusetts 01887

Michael Wagner USEPA REGION 1 1 Congress Street, Suite 1100 Mail Code: SEL Boston, MA 02114-2023

### **ATTACHMENT 1**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ONE CONGRESS STREET SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

March 14, 2006

Glenn Haas
Acting Assistant Commissioner
Bureau of Resource Protection
Department of Environmental Protection
One Winter Street, 2<sup>nd</sup> Floor
Boston, MA 02108

Re: Approval of Charles River and Alewife Brook/Mystic River Variances

Dear Mr. Haas:

I am writing to inform you that by this letter EPA approves variances for the Charles River and Alewife Brook/Mystic River through 2020, based on the understanding that MassDEP will periodically reissue the variances through this time period after holding public hearings for public comments and determining that there is no substantial change in conditions. Each reissued variance will include the condition that the MWRA must comply with relevant orders of the United States District Court for the District of Massachusetts, Civil Action Nos. 85-0489-MA and 83-1614-MA, and achieve the levels of control established in the LTCP.

On September 15, 2005 the Environmental Protection Agency ("EPA"), Region 1, approved the Massachusetts Department of Environmental Protection's ("MassDEP") August 22, 2005 submittal of extension of variances for CSO discharges by the Massachusetts Water Resources Authority ("MWRA") in the Lower Charles River and Alewife Brook/Mystic watersheds. These variance extensions were issued by MassDEP, after public review and comment, in the Fall of 2004 for terms not to exceed three years. In the September 15, 2005 approval, EPA agreed with MassDEP that it is not feasible to fully attain Class B water quality standards within the three-year terms of these variances.

The WQS variances are for combined sewer overflow (CSO) discharges by the Massachusetts Water Resource Authority (MWRA) and the Cities of Somerville and Cambridge to the Alewife Brook and Upper Mystic River, and for CSO discharges by the MWRA, the City of Cambridge, and the Boston Water and Sewer Commission to the Lower Charles River. Under state law, the variances were issued on September 1, 2004 and October 1, 2004, respectively, for the Alewife Brook and Mystic River and the Lower Charles River, for terms not to exceed three years. On

August 11, 2005, MassDEP's Acting General Counsel certified the variances as having been duly adopted pursuant to state law.

In accordance with the variances, combined sewer overflow discharges from permitted outfalls are not required to meet the Massachusetts Class B bacteria criteria during events when flow in the collection system exceeds the collection system conveyance capacity as a result of precipitation or snow melt. The variances are conditioned upon continued implementation of CSO long term control measures consistent with the MWRA's 1997 Final CSO Facilities Plan, as amended for the Alewife Brook and Mystic River and the Lower Charles River (the LTCP), and do not in any way delay the pace of implementation that would occur without the variances. Rather, the projects that are to be implemented during the term of these variances will improve water quality in the Alewife Brook/Mystic River and the Lower Charles River Basin.

Following EPA's previous approval, there have been discussions between MassDEP and EPA about how MWRA has satisfied the requirements for variances through the year 2020. Because the record indicates that the conditions supporting the 2004 variances will remain in place through 2020, EPA approves the variances.

The MWRA has completed numerous analyses since the late 1980s evaluating alternatives for eliminating combined overflows from the collection system tributary to the Deer Island Treatment Plant. Among these are the 1997 Combined Sewer Overflow Facilities Plan and Environmental Impact Report, the 2001 Notice of Project Change for the Long term Control Plan for Alewife Brook, and the 2004 Cottage Farm CSO Facility Assessment Report. Based on the analyses completed by the MWRA, MassDEP determined that proceeding at this time with controls necessary for full attainment of Class B water quality standards would result in substantial and widespread economic and social impact as those terms are used in 40 C.F.R. § 131.10(g)(6). EPA agrees that it is not feasible to fully attain Class B water quality standards for primary contact recreation prior to 2020.

As explained in its March 13, 2006 letter, MassDEP intends to reissue the variances in increments of no more than three years through 2020. Consistent with 40 C.F.R. § 131.20(a), at the end of each variance, MassDEP will make a draft determination on whether there is any reason not to reissue the variance for the receiving waters. MassDEP's draft determination will be subject to public comment and a public hearing, and provide notice and an opportunity to comment by the MEPA office within EOEA. Based on its review of public comments and absent a substantial change in conditions, MassDEP will reissue the variances, as applied to the MWRA only, provided that the MWRA is in compliance with relevant orders of the United States District Court for the District of Massachusetts, Civil Action Nos. 85-0489-MA and 83-1614-MA, and achieving the level of CSO controls required in the LTCP.

EPA has a record based on information provided by MassDEP that it is not feasible to fully attain the Class B water quality standards for primary contact recreation prior to 2020. Further, it is important for EPA to take action on the variance extensions through 2020 at this time in order to

provide certainty to the MWRA as it implements its Long-Term Control Plan and undertakes capital improvement planning. Therefore, in accordance with Section 303(c)(2) of the Clean Water Act and 40 C.F.R. Part 131, I hereby approve the MassDEP's resubmitted variances, including reissuance of the variances in increments of no more than three years with respect to the MWRA through the year 2020, subject to the following conditions established by the MassDEP:

- 1) The variances will be reviewed to determine if there is new information at least once every three years in accordance with 40 C.F.R. Sec. 131.20;
- 2) The variances will require the MWRA to comply with the Court Order and CSO Long-Term Control Plan referenced above; and
- 3) If CSO discharges to the Charles River, Alewife Brook or Mystic River cause impacts of a different character or outside of the range of impacts that can be expected based on available information, the conditions of the variance may need to be adjusted.

We look forward to continued cooperation with MassDEP on exercising our shared responsibility of implementing the water quality standards requirements under the Clean Water Act. If you have any questions about this approval, please contact Bill Beckwith (617-918-1544) or Michael Wagner (617-918-1735).

Sincerely,

Linda M. Murphy, Director

Office of Ecosystem Protection

cc: Glenn Haas, MassDEP Kevin Brander, MassDEP Marcia Sherman, MassDEP

Vernon Lang, USFWS

Mary Colligan, NOAAF

Peter Colosi, NOAAF

Gregory Stapleton, EPA SSB

### **ATTACHMENT 2**

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CSO Policy, Part II C. Long-Term CSO Control Plan

b. "Demonstration" Approach

A permittee may demonstrate that a selected control program, though not meeting the criteria specified in Il.C.4.a. above is adequate to meet the water quality-based requirements of the CWA.

To be a successful demonstration, the permittee should demonstrate each of the following:

- i. The planned control program is adequate to meet [water quality standards]and protect designated uses, unless [water quality standards] or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs;
- The CSO discharges remaining after implementation of the ii. planned control program will not preclude the attainment of [water quality standards] or the receiving waters designated uses or contribute to their impairment. Where [water quality standards] and designated uses are not met in part because of natural background conditions or pollution sources other than CSOs, a total maximum daily load, including a wasteload allocation and a load allocation, or other means should be used to apportion pollutant loads;

[59FR 18693, April 19, 1994].

Exhibit C

## Massachusetts Water Resources Authority



# Combined Sewer Overflow Control Plan

Quarterly Progress Report June 13, 2008

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### Exhibit C

Table 1. CS	Status as of June 13, 2008				
MWRA Contract	CSO Projects in Schedule Seven	IN DESIGN	IN	COMPLETE	
MWRA Managed Projects		1	I		
N. Dorchester Bay Tunnel N. Dorchester Bay Facilities	N. Dorchester Bay CSO Storage Tunnel and Related Facilities	X	X		
Pleasure Bay Storm Drain Improvement	ents			X	
Hydraulic Relief Projects	CAM005 Relief			X	
, ,	BOS017 Relief			X	
East Boston Branch Sewer Relief		X	X		
BOS019 CSO Storage Conduit				X	
Chelsea Relief Sewers	Chelsea Trunk Sewer Relief			X	
	Chelsea Branch Sewer Relief			X	
	CHE008 Outfall Repairs			X	
Union Park Detention/Treatment Fact	ility			X	
CSO Facility Upgrades and MWRA	Cottage Farm Upgrade			X	
Floatables	Prison Point Upgrade			X	
	Commercial Point Upgrade			X	
	Fox Point Upgrade			X	
	Somerville-Marginal Upgrade			X	
	MWRA Floatables and Outfall Closings			X	
Brookline Connection and Cottage Fa	X				
Charles River Interceptor Gate Contro	X				
Optimization Study of Prison Point CSO Facility					
Community Managed Projects					
South Dorchester Bay Sewer Separati	ion			X	
Stony Brook Sewer Separation			X		
Neponset River Sewer Separation					
Constitution Beach Sewer Separation			X		
Fort Point Channel Sewer Separation	and System Optimization			X	
Morrissey Boulevard Storm Drain			X		
Reserved Channel Sewer Separation		X			
Bulfinch Triangle Sewer Separation	X				
Brookline Sewer Separation	X				
Somerville Baffle Manhole Separatio			X		
Cambridge/Alewife Brook Sewer	CAM004 Outfall and Basin	X			
Separation	CAM004 Sewer Separation	X	X		
	CAM400 Manhole Separation	TBD			
	Interceptor Connection Relief/Floatables	TBD			
	MWR003 Gate and Rindge Ave. Siphon	TBD			
Region-wide Floatables Control and	d Outfall Closings			X	

TBD – Schedule will be determined as part of an amendment to the Memorandum of Understanding and Financial Assistance Agreement between MWRA and the City of Cambridge, currently being negotiated.

### 1. Quarterly Progress Overview

This quarterly progress report is presented to comply with reporting requirements in the Federal District Court's Order in the Boston Harbor Case. For the combined sewer overflow ("CSO") projects referenced in the Court's Order and its schedule of milestones (Schedule Seven), the report summarizes progress made during the period from March 15, 2008, to June 13, 2008, identifies project schedules relative to corresponding Court milestones, and describes issues that have affected or may affect compliance with Schedule Seven.

Detailed descriptions of the CSO projects and identification of all corresponding Court milestones for design and construction are not presented in this report but can be found in MWRA's CSO Annual Progress Report 2007, dated March 2008 (the "Annual Report"). The Annual Report is available for public review on MWRA's website, at www.mwra.com.

Table 1 shows the status of implementation for each of the 35 projects that comprise the long-term CSO control plan as referenced in Schedule Seven. As shown in Table 1, MWRA and the CSO communities have completed 22 of the 35 projects, one more than reported in the last quarterly report which MWRA submitted in March 2008 within the Annual Report. In April 2008, MWRA completed implementation and testing of optimized operational procedures at its Prison Point CSO Facility in accordance with its recommended plan for improving the hydraulic performance of the facility to minimize treated discharges to Boston Inner Harbor.

Four of the remaining projects are in the construction phase. Major construction continues on two of these projects: the North Dorchester Bay CSO storage tunnel and the related Morrissey Boulevard storm drain. As reported in past progress reports, MWRA and the City of Cambridge have completed early construction work on two other projects: East Boston Branch Sewer Relief and Cambridge Alewife Brook sewer separation, respectively. MWRA and Cambridge plan to issue additional construction contracts for these two projects in the near future, as discussed in the individual project sections of report. In addition, MWRA recently awarded the construction contract Connection/Cottage Brookline Farm Overflow the Interconnection and Gate Control project and expects to issue the notice to proceed by the end of June 2008, in compliance with Schedule Seven.

The following are highlights of the progress MWRA and the CSO communities made on CSO control projects in the second quarter of 2008. More information is provided in the individual project reports that follow.

- On April 23, 2008, MWRA sent a letter to the U.S. Environmental Protection Agency - Region 1 (EPA) and the Massachusetts Department of Environmental Protection (DEP) confirming the implementation and performance of improved operational procedures for the Prison Point Facility. MWRA confirmed it had fully implemented operational procedures it had recommended a year earlier to minimize treated discharges from the facility to Boston Inner MWRA also verified the predicted hydraulic performance the new procedures, which will facility with lower discharges in a typical rainfall year from 30 activations 335 million gallons to 17 activations and 243 million gallons. On April 30, 2008, MWRA filed a motion with the Court to modify the long-term level of control for the Prison Point CSO facility (outfall MWR203) in accordance with the updated performance predictions. The Motion was allowed by the Court on May 7, 2008.
- MWRA continued to make considerable progress ahead of schedule projections with construction of the \$149 million North Dorchester Bay CSO storage tunnel. As of June 13, 2008, the contractor's tunnel boring machine has mined 7,121 linear feet (66%) of the 10,832-foot total tunnel length. MWRA also continued to make substantial progress over the past quarter with the design of the tunnel related facilities, including the dewatering pump station, force main, and remote odor control facility.
- On May 10, 2008, MWRA advertised the estimated \$62.3 million microtunneling contract for the East Boston Branch Sewer Relief Project. MWRA expects to award the contract at its summer Board of Directors meeting and issue the notice to proceed shortly thereafter.
- On June 4, 2008, MWRA's Board of Directors awarded the \$1.97 million construction contract for the Brookline Connection/Cottage Farm Overflow Chamber Interconnection and Gate Control project. MWRA plans to issue the notice to proceed with the construction contract by the end of June 2008, in compliance with Schedule Seven. MWRA also made progress with the hydraulic evaluations that will support detailed design recommendations for the Charles River Interceptor Gate Controls and Additional Interceptor Connections project.
- BWSC continued to make progress with design of the \$113.8 million Reserved Channel sewer separation project and completed design of the \$10.2 million Bulfinch Triangle sewer separation project, which are intended to reduce CSO discharges to the Reserved Channel and the Charles River Basin, respectively. BWSC advertised the construction contract for Bulfinch Triangle sewer separation on May 14, 2008, and expects to receive construction bids on June 26, 2008.

The Town of Brookline continued to make progress with design of the

- The Town of Brookline continued to make progress with design of the \$23.5 million Brookline sewer separation project, which is intended to reduce CSO discharges to the Charles River Basin.
- MWRA and City of Cambridge staff are nearing final agreement on a plan, schedule and cost share to implement the Alewife Brook Sewer Separation plan and expect to present the agreement to the MWRA Board of Directors and City officials for approval soon.

### 2. Project Implementation

### 2.1 MWRA-Managed Projects

### North Dorchester Bay Tunnel and Related Facilities

MWRA continued to make substantial progress with construction of the CSO storage tunnel and with design of the related dewatering pump station, force main and remote odor control facility.

During the past three months, the contractor has mined approximately 3,557 feet of the North Dorchester Bay storage tunnel, bringing the total length of tunnel that is mined and lined to 7,121 feet, 66% of the proposed 10,832-foot tunnel. During this same period, the contractor suspended operation of the tunnel boring machine (TBM) from April 16 to May 19 to allow the manufacturer of the pre-cast concrete liner segments to catch up with the accelerated progress of the TBM and replenish the depleted reserve of tunnel segments on-site. The shutdown also allowed the contractor to perform needed maintenance work on the TBM. The contractor resumed mining on May 19.

The contractor also completed the construction of the emergency access shaft at Ticknor Street, at approximately the midpoint of the proposed tunnel, and the emergency shaft is now operational. In addition, the contractor completed restoration work at Moakley Park in the areas of the completed CSO and stormwater diversion structures at outfalls BOS085 and BOS086, completed trench excavation and cable installation for an NStar duct bank near outfall BOS087, and completed the connection of a new storm drain to the existing separate stormwater drain at Logan Way, upstream of outfall BOS086. The new drain and connection will facilitate the separate diversion of stormwater and CSO into the tunnel at this outfall. Over the next quarter, the tunnel contractor plans to begin CSO and stormwater diversion work at outfall BOS083.

Regarding design of the tunnel related facilities (i.e. dewatering pump station, force main, and remote odor control facility), MWRA issued a task order to the design consultant to include in the plans a

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restroom consistent with the Americans with Disabilities Act (ADA) requirements in the remote odor control facility, paving of the state police parking lot, and independent utilities at the dewatering pump station in lieu of connecting to Massport for water supply, drainage and fire alarm.

The design consultant submitted the Final Geotechnical Report and the Draft CSO Outfall Sedimentation Study in April 2008 and held a technical meeting with MWRA staff to review the outfall sedimentation findings to date. The study is intended to address the long-term reliability of the existing CSO outfalls to operate in only extreme (and rare) storm events once the storage tunnel is brought on-line.

The design consultant has prepared draft applications for MWRA to obtain a Sewer Extension Permit and a Chapter 91 License for the project. During the next quarter, all other draft construction permit applications will be prepared.

MWRA is currently reviewing the 100% design plans and construction specifications and plans to advertise the construction contract in November 2008.

### East Boston Branch Sewer Relief (BOS003-014)

On May 10, 2008, MWRA advertised the largest of the three construction contracts for this project, Contract 6257, which primarily involves installation of approximately 2.5 miles of new sewer interceptor along Condor, East Eagle and Chelsea Streets and also along Border, Streets, Marginal, Orleans and Bremen primarily using microtunneling method, with limited open trench sections. Due requests from contractors and specialty subcontractors, MWRA extended the bid opening date from June 19, 2008 to July 9, 2008. Although the MWRA will be unable to issue the Notice to Proceed with construction by June 30 in compliance with Schedule Seven, it plans to award the contract at its summer Board of Directors meeting and issue the Notice to Proceed shortly thereafter.

As previously reported, BWSC awarded its water, sewer and storm drain construction contract for work on Border and Condor Streets on July 19, 2007, and BWSC's contractor began physical construction in August 2007. BWSC expects its construction will be completed by the end of 2008. MWRA's microtunneling contract (Contract 6257) shares much of the same alignment as BWSC's construction. Overlap between the two projects will require coordination and could result in delays to MWRA's construction.

Also as earlier reported, the City of Boston advertised its contract for replacement of the Chelsea Street Bridge in September 2007. Construction bids are due by July 15, 2008. MWRA has been tracking this long-delayed project for many years to assess any impacts it may

have on MWRA's planned construction. The City of Boston estimates that the existing Chelsea Street Bridge will be taken out of service for a three-month to six-month period beginning 21 months after issuance of the City's notice to proceed. If it is issued in the fall of 2008, the bridge could be taken out of service during the summer of 2010, concurrent with completion of Contract 6257. With the bridge out of service, traffic will be rerouted to the Andrew P. McArdle Bridge (aka Meridian Street Bridge), impacting traffic volume on Condor and East Eagle Streets during MWRA's construction.

Under Contract 6257, MWRA will construct a jacking shaft and install pipes on ConocoPhillips' land on Chelsea Street. KeySpan (now National Grid) will occupy the ConocoPhillips parcel in Spring 2008 to commence installation of a 24-inch gas line by horizontal directional drilling under Chelsea Creek. National Grid occupied the ConocoPhillips parcel at the end of May 2008 and began construction. National Grid's construction has been delayed due to an obstruction encountered in the gas main alignment. MWRA cannot occupy the ConocoPhillips parcel until National Grid completes its gas main installation, which is currently scheduled for the end of Summer 2008.

MWRA has also completed its review of the 50% design plans and construction specifications for Contract 6841, the last of the three construction contracts to complete the project. Contract 6841 involves replacement and upgrade of approximately one mile of interceptor sewers in upstream areas using "pipebursting" methods. MWRA expects to receive the 100% plans and specifications this summer and issue the notice to proceed with construction by December 2008.

# Brookline Connection and Cottage Farm Overflow Chamber Interconnection and Gate Control

On June 4, 2008, MWRA's Board of Directors awarded a \$1.97 million construction contract for the Brookline Connection/Cottage Farm Overflow Chamber Interconnection and Gate Control project. MWRA plans to issue the Notice to proceed with the construction contract by the end of June 2008, in compliance with Schedule Seven. MWRA has obtained all necessary construction permits and land access agreements other than those which are the contractor's responsibility pursuant to the terms of the construction contract. The contract calls for substantial completion of work related to system performance and CSO control by June 2009 in compliance with Schedule Seven. Final site and vegetation restoration to address Boston and Cambridge Conservation Commissions's requirements will continue beyond June 2009.

This project is intended to reduce treated CSO discharges from the Cottage Farm CSO Facility to the Charles River Basin by increasing the conveyance of related wet weather flows to MWRA's Ward Street Headworks and Deer Island Wastewater Treatment Plant. The project involves modifications to existing MWRA facilities on both the

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Cambridge side and the Boston/Brookline side of the Charles River. These modifications will improve the conveyance capacities of the two MWRA sewers already in service that carry flows across the Charles River and bring into service a previously unutilized 54-inch diameter sewer (the "Brookline Connection") constructed nearly 40 years ago by MWRA's predecessor, the Metropolitan District Commission.

# Charles River Interceptor Gate Controls and Additional Interceptor Connections

In January 2008, MWRA issued the notice to proceed with the contract for hydraulic study and design services to optimize the hydraulic performance of the MWRA interceptor sewers along the Charles River Basin and minimize overflows to the Cottage Farm facility and other CSO outfalls. Since then, MWRA's engineering consultant has made considerable progress with the hydraulic model evaluations that will support design of the gate controls at existing interconnections between the Charles River Valley Sewer and the South Charles Relief Sewer and possible modifications to the existing connections between the North Charles Metropolitan Sewer and the North Charles Relief hydraulic is also intended study to recommendation for additional interceptor connections, which is due by January 2009 in compliance with Schedule Seven.

The consultant submitted the Final Hydraulic Modeling Work Plan to MWRA in March 2008 and the Draft Geotechnical/Hazardous Material Program Work Plan in April. The consultant also submitted the Hydraulic Modeling Technical Memorandum in May for MWRA review and held a related technical workshop with MWRA engineers and sewer system operators on June 4, primarily to review the baseline condition model results and preliminary alternatives for further evaluation.

### 2.2 Community-Managed Projects

### South Dorchester Bay Sewer Separation

By letter dated October 12, 2007, BWSC informed MWRA that it had closed all identified CSO regulators tributary to MWRA's Commercial Point and Fox Point CSO treatment facilities following its substantial completion of the South Dorchester Bay sewer separation project. Accordingly, MWRA decommissioned both facilities on November 1, 2007.

Since 2006, BWSC has metered flows in the separated sewer system and conducted hydraulic evaluations to verify whether hydraulic performance goals have been met. BWSC has completed its metering program and concluded that localized flooding of the separated sewer system could occur in large storms in certain areas, and BWSC proposes to remediate this condition with additional stormwater inflow removal. BWSC is continuing with private inflow source removal (downspout

disconnections) in the tributary areas, and MWRA is continuing to fund this work. All CSO regulators will remain closed.

### Morrissey Boulevard Storm Drain

A component of the North Dorchester Bay CSO control plan, the Morrissey Boulevard storm drain project is intended to direct some of the North Dorchester Bay stormwater away from MWRA's recommended CSO storage tunnel in storms greater than the 1-year design storm.

Construction of the Morrissey Boulevard Storm Drain commenced in December 2006, and BWSC's initial construction contract, to install a large diversion structure on outfall BOS087, is complete. BWSC issued the notice to proceed with the second, much larger construction contract in September 2007.

Construction activities conducted during the past quarter include the installation of open trench support, the driving of piles to support the 12 ft. by 12 ft. box culvert (i.e. the storm drain) and the installation of the pre-cast culvert sections from the University of Massachusetts (UMass) access road to a point just north of the Boston College High school service road. Work will progress north of this section towards Kosciusko Circle, and eventually the new outfall will be constructed from the UMass access road south to its outlet at Savin Hill Cove. The contract completion date is June 30, 2009, in compliance with Schedule Seven.

### Reserved Channel Sewer Separation

Reserved Channel sewer separation is intended to minimize CSO discharges to the Reserved Channel by separating combined sewer systems in adjacent areas of South Boston. Implementation of the recommended sewer separation plan will reduce the number of overflows to Reserved Channel from as many as 37 to 3 in a typical year.

BWSC recently submitted the preliminary design report and has commenced final design. As previously reported, the project cost estimate to lay the new storm drains through the congested residential and commercial streets and tight utility corridors that characterize the Reserved Channel area has greatly increased. BWSC's updated cost estimate for design and construction is \$113.8 million, \$50.7 million more than the \$63.1 million budget in MWRA's Proposed FY09 CIP (December 2007). MWRA is reviewing the design plans and detailed cost estimate, as well as alternative methods to meet CSO control goals, to determine how to proceed with this project. In the meantime, BWSC's design work remains on schedule for commencement of construction by May 2009 in compliance with Schedule Seven.

### Bulfinch Triangle Sewer Separation

The goal of the Bulfinch Triangle sewer separation project is to minimize CSO discharges to the Charles River by separating combined sewer systems in the area of Boston roughly bounded by North Station, Haymarket Station, North Washington Street, Cambridge Street and immediate environs. The recommended sewer separation plan is intended to reduce the number of overflows to the Charles River, reduce overflows to the Prison Point CSO facility and close outfall BOS049.

BWSC completed final design and advertised the construction contract on May 14, 2008, and it expects to receive construction bids on June 26, 2008. BWSC expects to commence construction before the November 2008 milestone in Schedule Seven. The cost of the project (design and construction) has greatly increased. BWSC's latest cost estimate is \$10.2 million, which is \$5.5 million more than the \$4.7 million budget in MWRA's proposed FY09 CIP (December 2007).

### Brookline Sewer Separation

This project will separate sewers in several areas of Brookline, totaling 72 acres, where there are remaining combined sewers tributary to MWRA's Charles River Valley Sewer. The project is intended to reduce discharges to the Charles River at the Cottage Farm facility.

The Town of Brookline is making scheduled progress with final design and plans to advertise the construction contract in August 2008. Design activities conducted this period include final drainage calculations and pipe sizing; preparation of plan and profile sheets, structural details of special structures, and specifications for microtunneling. In addition, Brookline is evaluating options to the proposed microtunneling of deep service connections. The cost estimate for design and construction of this project has increased significantly, to \$23.5 million, which is \$13.8 million above the \$9.7 million budget in MWRA's Proposed FY09 CIP (December 2007).

### Cambridge/Alewife Brook Sewer Separation

MWRA currently estimates that the five projects constituting the long-term CSO control plan for Alewife Brook, including CAM004 stormwater outfall and detention basin (Cambridge Contract 12), CAM400 manhole separation; interceptor connection relief and floatables control at CAM002, CAM401B, SOM01A and CAM001, CAM004 sewer separation, and MWR003 control gate/floatables control and MWRA Rindge Avenue siphon relief have to date experienced a delay of at least 24 months beyond the Schedule Seven milestones due to the wetlands appeals associated with Contract 12.

In addition, a notice of intent to file a Clean Water Act citizen suit was filed with EPA relevant to the issuance of the September 2007

variance extension for the Alewife Brook/Upper Mystic River.

In the meantime and despite these appeals, the MWRA and the Cambridge DPW have continued to prepare and discuss updated cost estimates, cash flows and cost sharing, risks going forward, and revised project schedules. MWRA and the City of Cambridge expect to finalize their negotiations on revisions to their CSO Memorandum of Understanding and Financial Assistance Agreement this month. Upon approval of the revisions by its Board of Directors, MWRA and the City of Cambridge plan to move forward with the design of Contract 12.

A portion of the Cambridge/Alewife sewer separation project is being implemented by MWRA. The work involves installation of an overflow control gate and floatables control at outfall MWR003 and hydraulic relief of an MWRA siphon near Rindge Avenue. Due to delays associated with Cambridge's Contract 12, MWRA has revised its schedule for the MWR003 improvements and Rindge Avenue Siphon. MWRA now plans to commence design by April 2011.