

Massachusetts Water Resources Authority



**Combined Sewer Overflow
Control Plan**

**Quarterly Progress Report
September 15, 2004**

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Table 1. CSO Project Progress

		Current Status		
		IN DESIGN	IN CONSTRUCTION	COMPLETE
Contract	CSO Projects			
North Dorchester Bay and Reserved Channel	N. Dorchester Bay Storage Tunnel and Related Facilities	✓		
	Reserved Channel Sewer Separation	Start 1/07		
	Morrissey Blvd. Drain	Resume 6/05		
Hydraulic Relief Projects	CAM005 Relief			✓
	BOS017 Relief			✓
East Boston Branch Sewer Relief		*	✓	
Fort Point Channel Sewer Separation and System Optimization		✓		
BOS019 CSO Storage Conduit		✓		
Chelsea Relief Sewers	Chelsea Trunk Sewer Relief			✓
	Chelsea Branch Sewer Relief			✓
	CHE008 Outfall Repairs			✓
Union Park Detention/Treatment Facility			✓	
CSO Facility Upgrades and MWRA Floatables	Cottage Farm Upgrade			✓
	Prison Point Upgrade			✓
	Commercial Point Upgrade			✓
	Fox Point Upgrade			✓
	Somerville-Marginal Upgrade			✓
	MWRA Floatables and Outfall Closings			✓
South Dorchester Bay Sewer Separation		✓	✓	
Stony Brook Sewer Separation			✓	
Neponset River Sewer Separation				✓
Constitution Beach Sewer Separation				✓
Somerville Baffle Manhole Separation				✓
Cambridge/Alewife Brook Sewer Separation		✓	✓	
Region-wide Floatables Control and Outfall Closings		✓	✓	

* Design suspended; project reassessment underway.

1. Quarterly Progress Overview

This quarterly progress report is presented to comply with reporting requirements in the Federal District Court's Orders in the Boston Harbor Case. For the combined sewer overflow (CSO) projects referenced in the Court's Order and its schedule of milestones, Schedule Six, the report summarizes progress made during the period from June 15, 2004, to September 15, 2004, identifies project schedules relative to corresponding Court milestones and describes issues that have affected or may affect compliance with Schedule Six. This report also identifies the status of certain planning and regulatory efforts that relate to continuing state and federal reviews of MWRA's long-term CSO control plan, toward full regulatory approval.

Detailed descriptions of the CSO projects and identification of corresponding Court milestones for design and construction are not presented in this report, but can be found in MWRA's *CSO Annual Progress Report 2003*, dated March 2004. The Annual Report is available for public review on MWRA's website, at www.mwra.com.

MWRA and its CSO member communities continue to make substantial design and construction progress on several CSO projects. No project was scheduled to be completed in the third quarter of 2004. As noted in the last quarterly report, MWRA has completed 14 of the 25 projects in its long-term CSO control plan, as shown in Table 1. Six projects are in construction. In some cases, design work or design reassessment continues even as construction contracts are underway or completed. Such is the case with the East Boston Branch Sewer Relief, South Dorchester Bay Sewer Separation, Cambridge/Alewife Brook Sewer Separation and Region-wide Floatables Controls projects.

A few changes have been made in Table 1 since the last quarterly report. The North Dorchester Bay and Reserved Channel projects have been renamed to be consistent with MWRA's revised recommended plan, which was presented in the Supplemental Facilities Plan and Environmental Impact Report ("SFP/EIR") that was approved by the Secretary of Environmental Affairs on July 16, 2004. The SFP/EIR proposed distinct schedules for each of the three listed projects. The table also shows that MWRA has commenced detailed design work on the North Dorchester Bay tunnel. In addition, Table 1 was changed to show that design work on the Stony Brook Sewer Separation project is substantially complete. All construction contracts to effect the separation work and reduce CSO discharges to the Stony Brook have been awarded.

MWRA expects to propose revisions to milestones in Schedule Six of the Court Order for the North Dorchester Bay/Reserved Channel projects, the East Boston Branch Sewer Relief project and the Cambridge/Alewife Brook Sewer Separation project, to incorporate new project recommendations. MWRA also expects to seek milestone changes for the Union Park Detention and Treatment Facility and BOS019 CSO Storage conduit projects (see

project reports, below), to address the need for longer construction durations.

The following are highlights of the progress MWRA made on CSO control projects in the third quarter of 2004. More information is provided in later sections of this report.

- MWRA continued to make substantial progress on the Union Park Detention and Treatment Facility construction contract, which is approximately 43% complete, while it also plans to extend the construction contract by at least 102 days to account for necessary additional work and work interruptions.
- On July 16, 2004, MWRA received a certificate from the Secretary of Environmental Affairs approving the Supplemental Facilities Plan and Environmental Impact Report on the Long-Term CSO Control Plan for North Dorchester Bay and Reserved Channel and allowing the revised recommended plan to move into design. MWRA began design of the North Dorchester Bay tunnel in early September.
- MWRA received the 100% design submission for the BOS019 CSO Storage Conduit project in July and expects to advertise the construction contract this November.
- BWSC continued to make design and construction progress on the South Dorchester Bay and Stony Brook sewer separation projects. BWSC also made substantial progress on the design of the Fort Point Channel Sewer Separation project.
- MWRA and the City of Cambridge continued to update work plans, schedules and estimated project costs for the revised Cambridge/Alewife Brook sewer separation plan, while Cambridge also made final design progress on certain components of the plan.
- On September 1, 2004, DEP issued a three-year extension to the Alewife Brook/Upper Mystic River CSO variance. DEP also recently issued a draft three-year extension to the Charles River CSO variance for public review and comment.

2. Alewife Brook/Upper Mystic River and Charles River Variances

The recently issued variance decision extends the Alewife Brook/Upper Mystic River Basin variance from September 1, 2004 to September 1, 2007. New conditions with the variance extension require MWRA and the cities of Cambridge and Somerville to implement the revised recommended CSO control plan for the Alewife Brook/Upper Mystic River Basin at a cost of \$74 million. The conditions also require MWRA to continue to perform its water quality monitoring program and the cities of Cambridge and Somerville to perform infrastructure investigations to determine if they can further reduce CSO discharges through hydraulic relief, sewer

separation, or other collection system controls. In addition, MWRA is required to review the assessment reports performed by the cities of Cambridge and Somerville to determine if there are any feasible, cost effective CSO control optimization measures that benefit water quality in the Alewife Brook/Upper Mystic River watershed which can supplement the current recommended plan.

Earlier this month, DEP issued a tentative determination proposing to extend the Charles River CSO Variance for a period not to exceed three years (to October 1, 2007), in order to require MWRA, Cambridge, and BWSC to proceed with and complete CSO abatement work and provide additional documentation and technical information which will allow DEP to determine the appropriate level of CSO control and associated water quality standard for the Lower Charles River Basin. MWRA will continue to implement the work included in the 1997 CSO Control Plan, subject to Federal Court milestones, during the extended variance period. DEP will be accepting written public comments on the proposal until September 28, 2004, and will hold a public hearing on September 27, 2004. DEP expects to issue a final determination on the variance extension by October 1, 2004.

3. Project Implementation

3.1 MWRA-Managed Projects

North Dorchester Bay and Reserved Channel

The Secretary of Environmental Affairs issued a certificate on July 16, 2004, approving the Supplemental Facilities Plan and Environmental Impact Report on the Long-Term CSO Control Plan for North Dorchester Bay and Reserved Channel ("SFP/EIR"). The certificate allowed MWRA to proceed with the design and permitting process for its recommended plan for CSO control along the South Boston beaches and the Reserved Channel. The certificate also noted several areas where MWRA should develop additional information during the regulatory permitting process, especially information related to the plan for diverting stormwater from the BOS087 outfall to Savin Hill Cove and South Dorchester Bay. The Secretary's decision also required MWRA to develop a monitoring program, including modeling, for water and sediment quality in Savin Hill Cove and South Dorchester Bay, particularly to identify project-specific impacts or changes to these water bodies.

MWRA has begun efforts to respond to the Secretary's requirement that MWRA file a Section 61 Finding with the MEPA Office describing its general approach for meeting the various requirements of the decision. MWRA plans to work with the Boston Water and Sewer Commission to develop the Section 61 Finding for submission to MEPA later this year or early next year in advance of submitting permit applications to state regulatory agencies and as BWSC prepares to undertake design efforts on the Morrissey Blvd. storm drain.

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In response to concerns raised by the Secretary, various public commenters, the Court, certain court parties and others, MWRA has taken steps to attempt to shorten the implementation schedule, especially for the North Dorchester Bay storage tunnel and related facilities. In June, MWRA staff proposed to the Board of Directors an approach for expediting delivery of the engineering services necessary to design and manage the construction of those elements of the recommended plan. The approach, now being implemented, includes expediting design efforts for the 17-foot diameter storage tunnel by amending the existing contract with Parsons Brinckerhoff/Metcalf & Eddy Joint Venture, avoiding the several months it would take to create a new contract and procure services. On August 11, the MWRA Board of Directors approved an amendment to the contract, and the new design services commenced on September 1, 2004.

The contract schedule has the objective of awarding the tunnel construction contract in the spring of 2006. The same schedule calls for an even earlier commencement of construction of the Pleasure Bay stormwater relocation improvements, with completion of construction as early as May 2006.

East Boston Branch Sewer Relief (BOS003-014)

MWRA commenced discussions with EPA and DEP in August regarding selection of a preferred plan for completing the East Boston Branch Sewer Relief project and attaining CSO control at outfalls in East Boston. MWRA expects the discussions to continue over the next few months and to lead to consensus on a preferred plan for completing the project. Then, MWRA will be able to recommend a final plan and resume design efforts that it suspended in 2002. Depending on the plan selected, an additional filing under MEPA regulations may be required.

BOS019 CSO Storage Conduit

MWRA received the 100% design submission and construction cost estimate on July 30, 2004. The updated cost estimate, \$7.2 million, is significantly greater than the \$2.3 million estimate in the 1997 Final CSO Facilities Plan and Environmental Impact Report, primarily due to significant increases in the project's size and complexity in order to meet CSO control goals, as well additional security and safety features.

MWRA recently reevaluated the construction schedule as part of the 100% design submission. MWRA plans to advertise the construction contract in November 2004 and commence construction by March 2005 in compliance with Schedule Six. However, the estimated construction duration has increased from 18 months to two years, with an estimated construction completion date of March 31, 2007, six months later than the corresponding milestone in Schedule Six.

Union Park Detention and Treatment Facility

The contractor continues to make progress on construction of the Union Park detention and treatment facility. Most of the contractor's work in the past quarter involved ongoing construction of the large, below-grade detention basins, as well as demolition and reconstruction within the existing Boston Water and Sewer Commission (BWSC) pump station building, in part to accommodate an additional diesel turbine pump and related exhaust stack. By the end of August 2004, construction was 43% complete overall.

Additional delays have been experienced by the contractor and are under review by MWRA. At a minimum, MWRA continues to propose a 102-day contract time extension due to the earlier, additional site remediation required in the detention basin area.

3.2 Community-Managed Projects

South Dorchester Bay Sewer Separation

South Dorchester Bay sewer separation is intended to eliminate CSO flows to the Commercial Point and Fox Point CSO treatment facilities by the court ordered milestone of November 2008, allowing MWRA to decommission these facilities. BWSC commenced construction in April 1999. To date five separation contracts have been completed. In the last quarter, BWSC commenced another construction contract (the last major separation contract), bringing the total number of ongoing contracts to four, which are at various stages of completion ranging from 1% to 58%. Overall project work has resulted in the installation of a total of 79,468 linear feet of new storm drain, bringing the project to approximately 59% completion overall, consistent with the required level of progress referenced in Schedule Six.

Final paving work is conducted under separate contracts. The first paving contract is complete, and a second paving contract which commenced in February 2003 and is approximately 62% complete.

Stony Brook Sewer Separation

Stony Brook sewer separation is intended to minimize CSO discharges into BWSC's Stony Brook Conduit, which drains to the Charles River Basin. BWSC commenced construction in July 2000 and has completed construction of the first two separation contracts. A third contract is approximately 52% complete, and the fourth and last contract, awarded in March 2004, is approximately 13% complete. BWSC has installed a total of 43,094 linear feet of new storm drains, and the project is approximately 59% complete, consistent with the required level of progress referenced in Schedule Six. BWSC has also completed approximately 60% of the initial final paving contract and 74% of the downspout disconnection contract.

Fort Point Channel Sewer Separation

The goal of the Fort Point Channel sewer separation is to eliminate CSO discharges in a typical year from outfalls BOS072 and BOS073. BWSC is continuing with final design, which is approximately 60% complete, and expects to commence construction by March 2005, in compliance with Schedule Six.

Cambridge/Alewife Brook Sewer Separation (CAM002 and CAM004)

Cambridge continues to prepare a Second Supplemental Preliminary Design Report (SSPDR) for the final recommended plan as presented in the Final Variance Report for the Alewife Brook/Upper Mystic River. MWRA expects to receive the SSPDR from Cambridge soon. In the meantime, Cambridge continues to make design progress on Contract 12, involving the new storm drain outfall and stormwater wetland necessary to support future sewer separation in the CAM004 area and closing of the CAM004 regulator, and submitted a Notice of Intent to the Conservation Commission for an Order of Conditions approving construction in wetland areas. Cambridge received an Order of Conditions, for Contract 12, from the Cambridge Conservation Commission on June 16, 2004. However, an appeal was filed by a group of citizens seeking a Superseding Order of Conditions from DEP. Cambridge is now responding to the appeal by providing additional information to DEP. Other, smaller components of the plan are also in design or under construction by Cambridge.

A portion of the Cambridge/Alewife sewer separation project is being implemented by MWRA. This component involves installation of an overflow control gate and floatables control at outfall MWR003 and hydraulic relief of an MWRA siphon near Rindge Ave. In the third quarter of 2004, MWRA continued to draft a scope of work for design of these project elements, with the objective of commencing design in 2005.

3.3 Region-wide Floatables Control and Outfall Closing Projects

MWRA and BWSC have completed work to control floatables in CSO discharges from the outfalls they own and operate, except as otherwise noted under "Cambridge Floatables Control," below.

Cambridge Floatables Control

Floatables control will be installed by Cambridge at four Cambridge outfalls (outfall CAM400 is no longer included as this outfall will instead be closed), as well as one Somerville outfall and one MWRA outfall, along Alewife Brook as part of the Cambridge/Alewife Brook sewer separation project. These controls were included in the various regulatory filings on the Cambridge/Alewife sewer separation project and Alewife Brook/Upper Mystic River Variance. Floatables control at one of these locations, CAM401A, was completed earlier this year. Final design of floatables control at the other locations is scheduled to begin shortly.

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Floatables control is also proposed at four Cambridge outfalls along the Charles River. Cambridge is finalizing the design scope of services and expects to begin final design in late 2004, after submittal of the SSPDR, and complete construction in 2006.