

UNITED STATES DISTRICT COURT  
for the  
DISTRICT OF MASSACHUSETTS

.....  
UNITED STATES OF AMERICA,

Plaintiff,

v.

METROPOLITAN DISTRICT COMMISSION,  
et al.,

Defendants.  
.....

CIVIL ACTION  
No. 85-0489-RGS

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

Plaintiff,

v.

METROPOLITAN DISTRICT COMMISSION,

Defendants.  
.....

CIVIL ACTION  
No. 83-1614-RGS

MWRA QUARTERLY COMPLIANCE AND  
PROGRESS REPORT AS OF SEPTEMBER 15, 2008

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from June 14, 2008 to September 15, 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 months of June and July 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. Commence Construction of Brookline Connection and Cottage Farm Overflow Chamber Interconnection and Cottage Farm Gate Control.

The Authority issued the Notice to Proceed with construction of the \$1.97 million Brookline Connection, Cottage Farm Overflow Chamber Interconnection, and Cottage Farm Gate Control project on June 30, 2008 in compliance with Schedule Seven. This project includes placing the previously unutilized 54-inch Brookline Connection conduit into service, implementing new gate controls and a control system for the Authority's Cottage Farm combined sewer overflow ("CSO") treatment facility, and installing an interconnection between the two overflow chambers outside the Cottage Farm facility to make optimum use of available upstream system storage and to improve the conveyance of wet weather flows to the Authority's Ward Street Headworks. Once implemented, this project is expected to provide further reductions in treated CSO discharges from the Authority's Cottage Farm CSO treatment facility.

B. Activities Not Completed.

1. Commence Construction of Interceptor Relief  
for BOS003-014.

As reported in its June 13, 2008 Compliance and Progress Report, the Authority extended the bid opening date for the second construction contract to provide Interceptor Relief for BOS003-014 in East Boston (Contract 6257) from June 19, 2008 to July 9, 2008 in order to give bidders more time to submit bids due to the geotechnical complexities of the contract, and was therefore unable to issue the Notice to Proceed with construction by the end of June in compliance with Schedule Seven. The Authority issued the Notice to Proceed with construction on July 29, 2008, one month later than scheduled.

While the Authority completed the first of three construction contracts for this CSO project in 2004, commencement of Contract 6257 on July 29 was a major step towards completion of the project and attainment of the long-term level of CSO control for the East Boston outfalls. This contract, with an award amount of \$59.9 million, is the largest of the East Boston contracts. It involves the installation of 2.5 miles of new sewer interceptor along Border, Condor, East Eagle and Chelsea streets and along Marginal, Orleans and Bremen streets, primarily using micro-tunneling methods to minimize conflicts with congested utilities and high traffic volumes. The interceptor relief project, at a total estimated cost of \$88.4 million, is intended to upgrade the hydraulic capacity of the Authority's East Boston Branch Sewer to convey more wet weather flow to the Deer Island Treatment Plant from East Boston and greatly

reduce CSO discharges to Boston Inner Harbor and Chelsea Creek at outfalls BOS003-014.

The contractor for Contract 6257 has made initial progress with early construction related activities. The contractor has commenced the pre-construction surveys and the lay-out for micro-tunnel jacking shafts, receiving shafts and geotechnical equipment installation points and has completed the marking of utilities by Dig Safe and leased a field office at 62 Condor Street. The contractor is also coordinating the relocation of utilities with the various utility owners and evaluating potential schedule impacts of the relocation of these utilities.

With construction now underway, the Authority is now evaluating the effect of the one-month commencement delay, as well as potential construction changes that have been suggested by the contractor since the notice to proceed, on the construction duration for Contract 6257 and the completion date for the interceptor relief project as a whole. Potential construction changes include revised shaft locations along the route of the microtunnel, additional utility relocations, and recommendations from the Authority's continuing coordination with ongoing or proposed construction activities in the area by other parties including Boston Water and Sewer Commission ("BWSC"), Boston Public Works Department, Massachusetts Highway Department, NationalGrid and ConocoPhillips.

In addition to the interceptor work that the Authority is implementing, BWSC continues to undertake sewer separation in parts of East Boston, which will improve further the level of CSO control provided by the Authority's CSO project. BWSC's sewer separation plans also call for closing the regulators tributary to one or more of the ten East Boston outfalls.

2. Complete Construction of CAM400 Manhole Separation.

The City of Cambridge was unable to complete construction of the CAM400 Manhole Separation project primarily due to delays attributable to 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>1</sup> The appeal is currently pending before the Massachusetts Superior Court. The CAM400 Manhole Separation project and the other four projects which comprise the Alewife Brook project are now approximately 27 months beyond their respective design and construction milestones in Schedule Seven.

Despite the petitioners' appeal, the Authority's and the City of Cambridge's staffs agreed on a final plan, schedule and cost share to implement the Alewife Brook Sewer Separation plan, and the Authority's Board

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<sup>1</sup> See Compliance and Progress Reports dated June 13, 2008, p. 6-7; 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; December 15, 2004, pp. 10-12; and September 15, 2004, pp. 6-7 for previous reports on the wetland permitting issue.

of Directors approved the agreement and authorized an amendment to the Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge that increases the financial award amount (Authority's cost share) from \$21.6 million to \$60 million, in addition to the \$2.7 million that the Authority plans to spend on its MWR003 Gate and Rindge Avenue Siphon Relief project. The total cost for the contracts Cambridge and the Authority have planned for the Alewife Brook Sewer Separation project is now \$117.4 million. The Authority and Cambridge anticipate that they will execute the amendment to the agreements and commence remaining design work by October 30, 2008.

In a related matter, the United States Environmental Protection Agency submitted a letter to the Massachusetts Department of Environmental Protection's ("DEP") commissioner on July 29, 2008 approving DEP's extensions of the Lower Charles River Basin CSO variance and the Alewife Brook/Upper Mystic River CSO variance.

C. Progress Report.

1. Combined Sewer Overflow Program.

(a) North Dorchester Bay Storage Tunnel and Related Facilities.

On August 13, 2008, the contractor for the North Dorchester Bay storage tunnel and related facilities completed mining the 2.1 mile storage tunnel with the tunnel boring machine ("TBM"), six months ahead of schedule. Completion of the tunnel in only 10 months was a remarkable technical accomplishment,

as the challenges and risks were significant. The designer, the contractor, and the highly-skilled union workers had to deal with varying and complex soft-ground conditions and high groundwater with only 20 to 30 feet of cover between the top of the tunnel and the ground surface. This is the largest diameter and longest soft-ground tunnel ever attempted in Boston using a TBM. With years of investment in detailed planning and design that included an extensive risk management program, peer involvement by an international team of tunnel experts, archeological research, and a comprehensive subsurface exploration program that included seismic surveys and almost 10,000 feet of test borings and probes, the Authority was able to execute a successful machine-driven soft-ground tunnel with no major impacts to utilities or the ground surface and no significant construction claims. The hole through of the TBM was attended by Chairman Ian A. Bowles, the Secretary of the Massachusetts Executive Office of Energy and Environmental Affairs, Robert W. Varney, the Region I Administrator of the United States Environmental Protection Agency and several labor and union officials.

During the past quarter, the contractor also completed installation of the diversion piping at CSO outfalls BOS083 and BOS084 and a drainage connection from Moakley Park to BOS086 and removed the TBM from the retrieval shaft. In addition, the contractor commenced the installation of the five connections between the tunnel and the diversion system drop shafts and the installation of the steel cofferdams for the diversion structures at the sites of CSO outfalls BOS081, BOS082, and BOS084.

With respect to the related facilities, the Authority continues to move forward with the design of the 15-MGD pump station at Massport's Conley Terminal and a 24-inch force main to be used to dewater the tunnel after storms and plans to commence construction in March 2009, as scheduled. However, due to the concerns of one of the abutters of the site of the remote odor control facility at the upstream end of the tunnel near the State Police Building on Day Boulevard, the Authority is currently evaluating different design alternatives for the odor control facility.

(b) Quarterly CSO Progress Report.

In accordance with Schedule Seven, the Authority submits as Exhibit "B" its Quarterly CSO Progress Report (the "Report"). The Report summarizes progress made in design and construction on the CSO projects during the past quarter and identifies issues that affect or may affect compliance with Schedule Seven.

By its attorneys,

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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 September 15, 2008:

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

Dated: September 15, 2008

**EXHIBIT A**

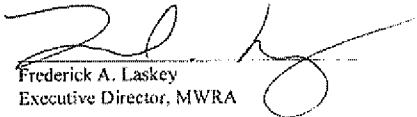
SCHEDULE SEVEN

**MWRA MONTHLY COMPLIANCE REPORT**  
June and July 2008

**EXHIBIT "A"**

MONTH/YEAR	CSO CONTROL	LONG-TERM SLUDGE MANAGEMENT	NEW BOSTON HARBOR SECONDARY TREATMENT PLANT
June 2008	<p>MWRA to commence construction of the Brookline Connection, Cottage Farm overflow chamber interconnection, and Cottage Farm gate control.</p> <p>(Completed June 30, 2008)</p> <p>MWRA to commence construction of interceptor relief for BOS003-014.</p> <p>(Completed one month late on July 29, 2008 - See Compliance &amp; Progress Report dated September 15, 2008)</p>		
July 2008	<p>MWRA, in connection with Cambridge, to complete construction of CAM400 Manhole separation.<sup>25</sup></p> <p>(Not Completed - See Compliance &amp; Progress Report dated September 15, 2008)</p>		

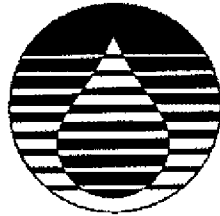
**Certification of Completed Activities**

By:   
 Frederick A. Laskey  
 Executive Director, MWRA

Date: September 15, 2008

**EXHIBIT B**

**Massachusetts Water Resources Authority**



**Combined Sewer Overflow  
Control Plan**

**Quarterly Progress Report  
September 15, 2008**

Massachusetts Water Resources Authority  
 Combined Sewer Overflow Control Plan  
 Quarterly Progress Report - September 2008

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**Table 1**  
**Status of CSO Project Implementation**  
**September 15, 2008**

MWRA Contract	CSO Projects in Schedule Seven	IN DESIGN	IN CONSTRUCTION	COMPLETE
<b>MWRA Managed Projects</b>				
N. Dorchester Bay Tunnel	N. Dorchester Bay CSO Storage Tunnel and Related Facilities	X	X	
N. Dorchester Bay Facilities				
Pleasure Bay Storm Drain Improvements				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 Facility				X
CSO Facility Upgrades and MWRA Floatables	Cottage Farm Upgrade			X
	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 Farm Overflow Interconnection and Gate			X	
Charles River Interceptor Gate Controls and Additional Interceptor Connections		X		
Optimization Study of Prison Point CSO Facility				X
<b>Community Managed Projects</b>				
South Dorchester Bay Sewer Separation				X
Stony Brook Sewer Separation				X
Neponset River Sewer Separation				X
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 Separation				X
Cambridge/Alewife Brook Sewer Separation	CAM004 Outfall and Basin	Resume 10/08		
	CAM004 Sewer Separation	X	X	
	CAM400 Manhole Separation	Start 10/08		
	Interceptor Connection Relief/Floatables	Start 10/08		
	MWR003 Gate and Rindge Ave. Siphon	Start 7/11		
Region-wide Floatables Control and Outfall Closings				X

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## 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 June 14, 2008, to September 15, 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](http://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, as reported in the last quarterly progress report on June 13, 2008. Five of the remaining projects are in the construction phase, one more than reported last quarter. MWRA issued the Notice to Proceed with the construction contract for the Brookline Connection/Cottage Farm Overflow Chamber Interconnection and Gate Control project on June 2, 2008. Construction work is also currently underway on three other projects: the North Dorchester Bay CSO storage tunnel, the Morrissey Boulevard storm drain, and the East Boston Branch Sewer Relief project (interceptor relief for outfalls BOS003-014) for which MWRA issued the Notice to Proceed with the second (and largest) construction contract on July 29, 2008. The fifth project shown as "in construction," as well as "in design," in Table 1 is CAM004 Sewer Separation, for which MWRA and the City of Cambridge completed early construction contracts several years ago, as previously reported.

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

- MWRA continued to make considerable progress ahead of schedule projections with construction of the \$149 million North Dorchester Bay CSO storage tunnel. On August 13, 2008, the tunnel contractor completed the mining and simultaneous lining of the 2.1 mile long soft-ground tunnel when the tunnel boring machine "holed-through" the wall of the receiving shaft adjacent to the South Boston State



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Police building. This construction contract continues with the removal of the TBM and supporting infrastructure such as the tunnel rail system, electric supply lines and ventilation, as well as installation of adits connecting the tunnel to the drop shafts, general tunnel cleanup, and completion of the CSO and stormwater diversion chambers and related near-surface piping. MWRA plans to advertise the contract for construction of the tunnel-related dewatering pump station and force main later this year.

- On July 29, 2008, MWRA issued the Notice to Proceed with the second construction contract for the interceptor relief project for outfalls BOS003-014, one month later than scheduled. This second contract, at an award amount of \$59.9 million, is the largest of three contracts that comprise the \$88.4 million East Boston Branch Sewer relief project. MWRA completed the first construction contract in 2004 and is now completing design of the third contract.
- On June 30, 2008, MWRA issued the Notice to Proceed with the \$1,976,000 construction contract for the Brookline Connection and Cottage Farm Overflow Connection and Gate Control project, in compliance with Schedule Seven. The contract calls for substantial completion by June 2009, as scheduled. This contract marks the commencement of construction of the first of four projects MWRA added to its long-term CSO control plan in 2006 to improve upon the level of CSO control for the Charles River.
- MWRA, BWSC and the Town of Brookline made substantial progress on three other projects intended to increase the level of CSO control for the Charles River. MWRA's design consultant completed the Draft Hydraulic Modeling Technical Report for the Charles River Valley/South Charles Relief Sewer Gate Controls and Additional Interceptor Connections project. The Report assesses the hydraulic performance of the interceptors that contribute overflows to MWRA's Cottage Farm CSO facility and evaluates alternatives for improving system performance and further reducing treated and untreated CSO discharges to the Charles River. In addition, BWSC has awarded the construction contract for the \$10.2 million Bulfinch Triangle Sewer Separation project and expects to issue the Notice to Proceed by September 30, 2008, in advance of the November 2008 milestone in Schedule Seven. The Town of Brookline is completing design and plans to advertise the first construction contract for the \$23.5 million Brookline Sewer Separation project this month and award the contract by November 2008, in compliance with Schedule Seven.
- BWSC continues to make progress with design of the Reserved Channel sewer separation project, and MWRA continues to support and fund this project in spite of a large increase to the project cost estimate. Earlier this year, BWSC issued an updated cost estimate based on new information compiled during its preliminary design

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phase that nearly doubled the estimated cost for engineering and construction from \$54.6 million to \$113.8 million in MWRA's Capital Improvement Program (CIP) budget, without any increase in CSO control or water quality benefit. MWRA recently considered alternatives to this project, but determined that sewer separation continues to be the most appropriate and least costly option for CSO control in spite of the higher estimate.

- MWRA and City of Cambridge staffs reached substantial agreement on a plan, schedule and cost share to implement the revised Alewife Brook Sewer Separation plan in full. On July 16, 2008, MWRA's Board of Directors approved the agreement and authorized an amendment to the Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge that increases the financial award amount (i.e. MWRA's cost share from \$21,635,000 to \$60,021,000 and extends the term of the agreements by 96 months, to December 31, 2015. With this agreement and MWRA funding authorization, the City of Cambridge is able to move forward with design and construction of the Alewife projects. Cambridge expects to resume design work next month (October 2008) and commence construction in October 2009.

## 2. Project Implementation

### 2.1 MWRA-Managed Projects

#### North Dorchester Bay Tunnel and Related Facilities

MWRA continued to make substantial progress ahead of schedule with construction of the CSO storage tunnel. On August 13, 2008, the tunnel contractor completed the 10,832-foot long, 17-foot diameter soft-ground tunnel six months ahead of the contract schedule when it "holed-through" the tunnel boring machine (TBM) through the wall of the retrieval shaft adjacent to the South Boston State Police building. The contractor was able to complete the tunnel in only ten months, six months earlier than the contract schedule, since commencing the mining operation at the Conley Terminal mining shaft in October 2007. After completing the tunnel, the contractor disassembled and removed the TBM from the retrieval shaft and it has commenced the installation of the five short adit connections between the tunnel and the diversion system drop shafts at the existing CSO outfalls.

In the past quarter, the contractor completed installing the diversion conduits to redirect CSO and stormwater flows from CSO outfall BOS083, which will be abandoned, to outfall BOS084. The contractor also completed installing the new drainage system upstream of outfall BOS086 from Moakley Park to Logan Way, but the installation of the drainage system along Logan Way has been delayed pending redesign to avoid subsurface utilities and related hazardous material. The contractor also commenced the installation of the steel cofferdams

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for the diversion structures at CSO outfalls BOS081, BOS082 and BOS084.

MWRA also made progress with design of the tunnel related facilities, including the 15 million gallon per day dewatering pumping station at the downstream end of the tunnel at Conley Terminal, the 24-inch dewatering force main, and the remote odor control facility at the upstream end of the tunnel. However, due to the potential for significant design changes to the remote odor control facility to respond to concerns raised by an abutter and the need to expedite the remaining design work to meet the court schedule, the MWRA recently removed the remote odor control facility from the construction contract package for the pumping station and force main and plans to prepare a separate contract package for it. MWRA is now developing a work plan and schedule for preparing the odor control facility construction documents.

MWRA's design consultant is moving the contract package for the pumping station and force main forward on schedule. It submitted the second 100% design documents on September 5, 2008, which MWRA is now reviewing. The design consultant also recently submitted the Draft CSO Outfall Sedimentation Study. This study is intended to support a recommended plan to ensure the reliable hydraulic performance of the existing outfalls after the storage project is brought on-line and the outfalls then rarely activate. The design consultant also filed applications for the following construction permits: DEP Chapter 91 License, City of Boston Public Improvement Commission Grant of Location License, Boston Conservation Commission Order of Conditions, and Massachusetts Coastal Zone Management Consistency Certification.

The design consultant plans to submit all remaining construction permit applications and complete the construction contract documents for the pumping station and force main for advertisement in October 2008.

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

On July 29, 2008, MWRA issued the Notice to Proceed with construction of the second contract to provide Interceptor Relief for BOS003-014 in East Boston (Contract 6257). MWRA completed the first construction contract for the East Boston project in 2004 and is completing design of the third contract (Contract 6841). As previously reported, MWRA extended the bid opening date for Contract 6257 from June 19, 2008 to July 9, 2008 in order to give bidders more time to submit bids due to the geotechnical complexities of the contract, and was therefore unable to issue the Notice to Proceed with construction by the end of June 2008 in compliance with Schedule Seven.

At a cost of \$59.9 million, Contract 6257, is the largest of the East Boston contracts. It involves the installation of 2.5 miles of new sewer interceptor along Border, Condor, East Eagle and Chelsea streets

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and along Marginal, Orleans and Bremen streets primarily using micro-tunneling methods to minimize conflicts with congested utilities and high traffic volumes along the East Boston streets.

With the contractor now onboard and construction scheduling and mobilization underway, MWRA is evaluating the effect of the one-month delay in commencing the contract, as well as potential construction changes that have been suggested by the contractor, on the construction duration for Contract 6257 and the completion date for the interceptor relief project as a whole. Suggested construction changes include revised shaft locations along the route of the microtunneling, additional utility relocations, and recommendations from MWRA's continuing coordination with ongoing or proposed construction activities in the area by other parties including Boston Water and Sewer Commission, Boston Public Works Department, Massachusetts Highway Department, NationalGrid and ConocoPhillips.

In the meantime, the contractor for Contract 6257 has made progress with early construction related activities. The contractor has commenced the pre-construction surveys and the lay-out for micro-tunnel jacking shafts, receiving shafts and geotechnical equipment installation points. The contractor has completed the marking of utilities by Dig Safe and leased a field office at 62 Condor Street. The contractor is also coordinating the relocation of utilities with the various utility owners.

MWRA also continues to make progress with design of the third East Boston construction contract, Contract 6841, which involves replacement and upgrade of approximately one mile of interceptor sewers in upstream areas using "pipebursting" methods. MWRA received the 100% plans and specifications on August 25, 2008, and expects to advertise the construction contract for bids later this year.

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

On June 30, 2008, MWRA issued the Notice to Proceed with the \$1,976,000 construction contract for this project, complying with Schedule Seven. This project is the first to move into construction of four projects MWRA added to the CSO control plan for the Charles River in its 2006 agreement with EPA and DEP for long-term plan approval.

The Brookline Connection and Cottage Farm Overflow Chamber Interconnection and Gate Control 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 Cambridge side and the Boston/Brookline side of the Charles River. These modifications will improve the conveyance

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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.

The construction contract calls for substantial completion of all work related to system performance and CSO control by June 30, 2009, in compliance with Schedule Seven. Surface restoration to comply with conditions in wetlands permits issued by the Boston and Cambridge conservation commissions will continue beyond June 2009.

Since commencement of the contract in June, the contractor has executed subcontractor agreements and equipment purchases, prepared required submittals on the earth support system, dewatering system, and groundwater treatment, and completed preconstruction surveys. Over the next quarter, MWRA expects to complete its review and approval of the contractor's submittals, and the Contractor is scheduled to mobilize equipment onto the Cottage Farm site, bring the dewatering and groundwater treatment systems on-line, complete the installation of the earth support system, and commence excavation activities.

**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 for optimizing the hydraulic performance of the MWRA interceptor sewers along the Charles River Basin and minimizing 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 Sewer. The hydraulic study is also intended to determine whether additional interceptor connections can improve system performance and further reduce CSO discharges, in accordance with a January 2009 milestone in Schedule Seven.

In the past quarter, MWRA's engineering consultant substantially completed the hydraulic evaluations of the sewer system baseline condition and the alternatives for system optimization that were included in the contract scope, culminating in submission of the Draft Hydraulic Modeling Technical Report on August 28, 2008, which MWRA is now reviewing. The consultant has also completed the geotechnical and hazardous materials exploration program in areas of potential construction to reasonably assess the construction requirements and costs of the system optimization alternatives. Over the next quarter, the consultant is scheduled to complete the Draft Geotechnical and

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Hazardous Materials Report and a draft of the Preliminary Design Report, which will recommend, by January 2009, a system optimization plan that may include a recommendation to add interceptor connections.

## **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 newly separated sewer system and conducted hydraulic evaluations to verify whether hydraulic performance goals have been met. On September 8, 2008, BWSC submitted a report to MWRA that presents the results of the flow monitoring and hydraulic analysis program and identifies the potential for localized flooding of the system in large storms in certain areas. To mitigate this risk, the BWSC report evaluates technology options, including off-line storage and inflow removal. The report concludes that disconnecting the most difficult building roof leader connections, which were not included in the completed construction contracts, appears to be more cost-effective than constructing storage facilities. BWSC continues to identify and remove private inflow sources, and MWRA is continuing to fund this work. All CSO regulators 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, in compliance with Schedule Seven, and BWSC's initial construction contract is complete. BWSC issued the Notice to Proceed with the second, much larger, construction contract on September 24, 2007.

During the past quarter, BWSC's contractor continued with installation of the 12-ft. x 12-ft. box culvert. To date, more than 1,600 feet of box conduit has been installed. The installation of the pile cap continued between the Boston College High School service road and the UMass access road. The contractor has also begun to install piles for "Manhole A" and "Particle Separator A." The particle separator will provide a level of treatment to the stormwater flows prior to discharge to Savin Hill Cove. Work continues in the area south of Mt.



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Vernon Street with pre-trenching for trench support sheeting. Also, the contractor completed the sheeting installation at the sea wall for the Savin Hill Cove outfall. The construction 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 submitted the preliminary design report in spring 2008. As expected and 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 increased to \$113.8 million in MWRA's recently approved FY09 CIP, nearly double the budget in MWRA's FY08 CIP, with no increase in the predicted level of CSO control or water quality benefit. BWSC is continuing with final design and has provided MWRA the 50% design drawings for the first of nine planned construction contracts (including six major sewer separation contracts and three downspout disconnection and paving contracts). The project schedule calls for the first contract to be advertised by December 2008 and to commence by April 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.

BWSC advertised the construction contract on May 14, 2008, and received bids on June 26. BWSC expects to issue the Notice to Proceed this month, in advance of the November 2008 milestone in Schedule Seven.

**Brookline Sewer Separation**

This project involves sewer separation 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 has decided to split the project into two construction contracts. Brookline recently completed the construction bid documents for the first contract and plans to advertise the contract this month, in advance of the November 2008 milestone in

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Schedule Seven. The first contract has an estimated value of \$1.75 million and includes installation of storm drains north and south of Beacon Street. Brookline plans to advertise the second contract, with an estimated value of \$15.7 million, in the spring of 2009. It includes installation of sanitary sewers in Beacon, St. Mary's, and Monmouth streets.

**Cambridge/Alewife Brook Sewer Separation**

MWRA and City of Cambridge staff reached substantial agreement on a plan, schedule and cost share to implement the Alewife Brook Sewer Separation plan. On July 16, 2008, MWRA's Board of Directors approved the agreement and authorized an amendment to the Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge that increases the financial award amount (MWRA cost share) from \$21.6 million to \$60.0 million, in addition to \$2.7 million MWRA will spend to implement its MWR003 Gate and Rindge Avenue Siphon Relief project. The total cost of the contracts Cambridge and MWRA have planned for the Alewife Brook Sewer Separation project (MWRA and Cambridge cost shares) is \$117.4 million. MWRA and Cambridge expect to execute the amendment to the agreements, coordinate necessary contract work and commence remaining design services by October 30, 2008. The five projects that comprise the Alewife Brook CSO plan have been delayed a total of 27 months beyond their respective design and construction milestones in Schedule Seven primarily due to the citizens' appeals of wetlands permits issued by the Cambridge Conservation Commission and the Massachusetts Department of Environmental Protection for a key component of the project.

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 wetlands permit, MWRA has revised its schedule for the MWR003 improvements and Rindge Avenue Siphon. MWRA now plans to commence design by April 2011.