

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 DECEMBER 15, 2008

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from September 16, 2008 to December 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 month of November 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. Complete Construction of South Dorchester Bay Sewer Separation.

On October 12, 2007, Boston Water and Sewer Commission ("BWSC") notified the Authority of its having confirmed that all of the regulators tributary to the Commercial Point and Fox Point combined sewer overflow ("CSO") treatment facilities were closed in accordance with the goals of the Authority's long-term CSO control plan, thirteen months ahead of the Schedule Seven milestone. On November 1, 2007, the Authority decommissioned its Commercial Point and Fox Point facilities. With the closure of the CSO regulators, CSO discharges to the beaches of South Dorchester Bay, including Malibu Beach, Savin Hill Beach and Tenean Beach have been eliminated.

The South Dorchester Bay sewer separation project involved the work of 15 construction contracts managed by BWSC over a period of eight years beginning in April 1999. In that period, BWSC installed more than 135,000 linear feet of new storm drain and miles of new sewer pipe and removed several thousand building downspout connections to the sewer system. The separation work covered an area of more than 1,750 acres, or 2.7 square miles.

The Authority funded approximately \$119 million of the cost of the separation work under its CSO Memorandum of Understanding and Financial Assistance Agreement with BWSC, and continues to fund the associated eligible costs for additional inflow removal (e.g., downspout disconnections) and paving.

2. Commence Construction Of Bulfinch Triangle Sewer Separation.

On September 29, 2008, BWSC issued a notice to proceed with the construction contract for the Bulfinch Triangle sewer separation project, two months in advance of the November milestone for commencement of construction in Schedule Seven. This project involves separating combined sewer systems in the area of Boston bounded by North Station, Haymarket Station, North Washington Street, and Cambridge Street. Once implemented, this project is expected to reduce CSO discharges to the Charles River, reduce flows conveyed to the Prison Point CSO facility and allow for the closure of CSO outfall BOS049.

3. Commence Construction of Brookline Sewer Separation.

On November 21, 2008, the Town of Brookline issued a notice to proceed with the first construction contract for the Brookline sewer separation project in compliance with Schedule Seven. As part of this project, the Town of Brookline will separate approximately 72 acres of its remaining combined sewer systems, with the goal of reducing wet weather flows in interceptors

along the Charles River and discharges from the Authority's Cottage Farm CSO treatment facility.

B. Progress Report.

1. Combined Sewer Overflow Program.

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

Since completion of tunnel mining in August, the contractor has installed the adits connecting the tunnel to the drop shafts at outfalls BOS081, BOS082, BOS084, BOS085 and BOS086. The contractor had previously completed the installation of surface pipelines that divert CSO and stormwater flows from BOS083 to outfall BOS084, allowing BOS083 to be abandoned. At the upstream tunnel shaft by outfall BOS087, the contractor previously installed surface pipelines and diversion structures that will allow stormwater flows now discharging through outfall BOS087 during smaller storm events to be diverted to the storage tunnel once it is placed into operation. In larger storm events, stormwater flows to BOS087 will be diverted to the Morrissey Boulevard storm drain.

The contractor is also proceeding with substantial near-surface work, including the installation of the CSO and stormwater diversion chambers and piping connections at outfalls BOS081, BOS082 and BOS084. The contractor previously completed the diversion chambers and most of the piping at outfalls BOS085, BOS086 and BOS087. The removal of staging and support

equipment from the tunnel in preparation for cleaning and final acceptance is ongoing and expected to be completed by the end of the month.

As reported last quarter, the Authority has for many months been attempting to reach consensus, though community input and approval processes were long ago completed, as to the final design of the odor control facility with an abutter that has expressed concerns about the potential impact of the facility upon its own development plans in the immediate vicinity of the Authority's facility. These concerns have most recently focused upon the possibility of "submerging" the facility below ground, a more costly alternative for the Authority. Although there is no certainty that "negotiations" around this possibility are at an end, the Authority is proceeding with completion of the original above-ground design and is confident the odor control technology to be employed will be effective. Given the need to complete both design and construction of this facility under Schedule Seven by May 2011, in time for the 2011 summer swimming season, the Authority cannot afford any further delays. With virtually no remaining margin for error, any eleventh hour re-design of the facility may seriously jeopardize timely completion of this project.

The design of the 15 million gallons-per-day pump station at Massport's Conley Terminal and 24-inch force main to be used to dewater the tunnel after storms remains on schedule, and the Authority anticipates completing construction by May 2011, in compliance with Schedule Seven. To date, the Authority has received certain permits for the work, including a Grant of Location License from the Boston Public Improvement Commission and a

wetlands Order of Conditions from the Boston Conservation Commission. The Authority has also filed applications for a Massachusetts Department of Environmental Protection Chapter 91 license and a construction permit from the Massachusetts Department of Conservation and Recreation, which controls some of the land through which the force main will be installed.

(b) Cambridge Sewer Separation.

As previously reported, the Authority's Board of Directors approved an agreement between the Authority and the City of Cambridge on a final plan, schedule and cost share for the Alewife Brook Sewer Separation plan and authorized an amendment to the Memorandum of Understanding and Financial Assistance Agreement with the City of Cambridge that increased the financial award amount (Authority's cost share) from \$21.6 million to \$60 million bringing the total cost of the project to \$117.4 million. Since that time, the Authority and City of Cambridge have executed amendments to their Memorandum of Understanding and Financial Assistance Agreement regarding the long-term CSO control plan for Alewife Brook and the City of Cambridge commenced design services for three of the five projects that comprise the plan.

In the meantime, Suffolk Superior Court allowed the City of Cambridge's motion to dismiss the 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 - CAM004 stormwater

outfall and detention basin) pursuant to the Wetlands Protection Act.¹ As a result of the appeal process, 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. Based on the current construction schedule, the Authority expects that the City of Cambridge will commence construction of the CAM004 stormwater outfall and detention basin and the CAM400 manhole separation projects by October 2009, barring any further delays.

(c) Commence Construction of Interceptor Relief for BOS003-014.

The contractor for the micro-tunneling portion of the Interceptor Relief for BOS003-014 project in East Boston continues with construction activities for Contract 6257, the second and largest of the project's three construction contracts. The contractor continues to hold utility coordination meetings with NSTAR, NationalGrid, Comcast, Verizon, the Massachusetts Bay Transit Authority, and BWSC to identify and address previously known and recently discovered utility conflicts at the mining shaft locations. The contractor has completed initial test pit excavations and the layout of micro-tunneling shafts along Chelsea Street, East Eagle Street, Condor Street and Border Street, including layout changes to address utility conflicts. In order to mitigate

¹ See Compliance and Progress Reports dated September 15, 2008, pp. 5-6; 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.

delays caused by utility conflicts, the Authority and the contractor are evaluating different means to compress the construction schedule, including changing the layout for the relief sewer, working in winter months, and adding a third tunneling shift.

Over the next quarter, the Authority will continue to evaluate the effects, including scheduling impacts, of construction changes that have been and may continue to be proposed by the contractor. Any extension of the contract duration will push the completion date for the interceptor relief project as a whole beyond the June 2010 milestone in Schedule Seven. In addition to utility conflicts, the Authority will continue to address any other potential work and schedule changes the contractor may propose, including changes that may arise from any impacts to the CSO work by other construction projects in the area, including projects being implemented by BWSC, the Boston Public Works Department, the Massachusetts Highway Department, NationalGrid and ConocoPhillips. At this time, the Authority believes that the contractor can bring the contract and project to substantial completion by June 2010.

(d) 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.

C. Fore River Pelletizing Plant.

As previously reported, the Authority's Fore River Pelletizing Plant (or biosolids facility) experienced a fire in an insulated horizontal air exhaust duct located inside the facility on October 28, 2008.² The Authority's contract operator, New England Fertilizer Company ("NEFCO"), has since substantially completed repairs to the facility and was able to recommence operation of the pelletizing portion of the facility on December 8, 2008.

In addition to making repairs to the damaged portions of the facility, NEFCO is in the process of installing a fire suppression system within the main manifold section of the ductwork that was damaged. This system should be available for service by the end of December 2008. NEFCO also updated its preventive maintenance program to include ductwork cleaning and inspection as part of its routine maintenance work order system.

During the period of shutdown, NEFCO arranged for dewatered biosolids to be trucked to several landfills and incinerators throughout New England and in the State of New York, in accordance with its approved Emergency Operations Plan. At no time was there any disruption to the disposal of biosolids or to the treatment process at Deer Island as a result of this fire. At all times the Authority remained in full compliance with its National Pollutant Discharge Elimination System Permit.

² See Special Report of MWRA Concerning Fore River Pelletizing Plant dated October 31, 2008.

Throughout this process, the Authority has worked closely with a number of local and state jurisdictions, especially the City of Quincy Fire Department. The Quincy Fire Chief inspected the facility on December 5, 2008 and granted permission for pelletizing to resume as of December 8, 2008.

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 December 15, 2008:

/s/ John M. Stevens
John M. Stevens (BBO No. 480140)
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Dated: December 15, 2008
B3577043.1

EXHIBIT A

SCHEDULE SEVEN

MWRA MONTHLY COMPLIANCE REPORT
November 2008


EXHIBIT "A"
**NEW BOSTON HARBOR
SECONDARY
TREATMENT PLANT**

**LONG-TERM
SLUDGE
MANAGEMENT**

MONTH/YEAR CSO CONTROL

- November 2008 MWRA, in cooperation with BWSC, to assure completion of construction of South Dorchester Bay sewer separation.²⁶
(Completed October 12, 2007)
- MWRA, in cooperation with BWSC, to commence construction of Bulfinch Triangle sewer separation.²⁶
(Completed September 29, 2008)
- MWRA, in cooperation with Brookline, to commence construction of Brookline sewer separation.²⁶
(Completed November 21, 2008)

Certification of Completed Activities

By: 
Frederick A. Laskey
Executive Director, MWRA

Date: December 15, 2008

EXHIBIT B

Massachusetts Water Resources Authority

**Combined Sewer Overflow
Control Plan**

**Quarterly Progress Report
December 15, 2008**

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

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Table 1
Status of CSO Project Implementation
December 15, 2008

MWRA Contract	CSO Projects in Schedule Seven	IN DESIGN	IN CONSTRUCTION	COMPLETE
MWRA Managed Projects				
N. Dorchester Bay Tunnel	N. Dorchester Bay CSO Storage Tunnel and Related Facilities	X	X	
N. Dorchester Bay Facilities				
Pleasure Bay Storm Drain Improvements				
Hydraulic Relief Projects	CAM005 Relief			X
	BOS017 Relief			X
East Boston Branch Sewer Relief				
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				
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
Community Managed Projects				
South Dorchester Bay Sewer Separation				
Stony Brook Sewer Separation				
Neponset River Sewer Separation				
Constitution Beach Sewer Separation				
Fort Point Channel Sewer Separation and System Optimization				
Morrissey Boulevard Storm Drain			X	
Reserved Channel Sewer Separation		X		
Bulfinch Triangle Sewer Separation			X	
Brookline Sewer Separation		X	X	
Somerville Baffle Manhole Separation				
Cambridge/Alewife Brook Sewer Separation	CAM004 Outfall and Basin	X		
	CAM004 Sewer Separation	X ⁽¹⁾	X ⁽¹⁾	
	CAM400 Manhole Separation	X		
	Interceptor Connection Relief/Floatables	X		
	MWR003 Gate and Rindge Ave. Siphon	Start July 2011		
Region-wide Floatables Control and Outfall Closings				X

⁽¹⁾ In 1997-2002, the City of Cambridge completed the design and construction of four initial contracts to separate the CAM004 tributary area and close this outfall. Cambridge plans to commence design of the remaining CAM004 sewer separation work by February 2010 and complete construction by April 2015.

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Combined Sewer Overflow Control Plan
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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 September 16, 2008, to December 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.

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 and reported in earlier quarterly progress reports (September 15, 2008 and June 13, 2008), MWRA and the CSO communities have completed 22 of the 35 projects. Seven of the remaining projects are in the construction phase, two more than reported last quarter. Boston Water and Sewer Commission ("BWSC") issued the notice to proceed with the sole construction contract for the Bulfinch Triangle sewer separation project effective September 29, 2008. The Town of Brookline issued the notice to proceed with the first of two construction contracts for the Brookline sewer separation project on November 21, 2008, and plans to advertise the second contract for construction bids in Spring 2009.

Construction work continues on four other projects: North Dorchester Bay CSO storage tunnel; Morrissey Boulevard storm drain; East Boston Branch Sewer relief project (interceptor relief for outfalls BOS003-014); and Brookline connection and Cottage Farm overflow interconnection and gate. The seventh project shown as "in construction" (as well as "in design") in Table 1 is CAM004 sewer separation, for which the City of Cambridge and MWRA completed early construction contracts several years ago, as previously reported.

Later sections of this report provide information on the recent progress and status of the 13 CSO projects referenced in Schedule Seven that are not yet complete. In addition to ongoing work on these projects, BWSC issued a notice to proceed on November 14, 2008, with a design contract for CSO-related improvements in an area tributary to BWSC's Dorchester Brook Conduit, which discharges stormwater and CSO

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flows to the Fort Point Channel at outfall BOS070. These improvements, which are not referenced in the Court Order, are a recent MWRA and BWSC recommendation intended to ensure that CSO discharges to the Dorchester Brook Conduit are in line with the levels of control identified in the long-term CSO control plan. BWSC and MWRA will share the cost of these improvements pursuant to the terms of an amendment to their CSO Memorandum of Understanding and Financial Assistance Agreement. Specifically, MWRA will fund the relocation of regulator RE070/11-2 and sewer separation in a 25-acre area up to a funding cap, with BWSC paying any higher costs. BWSC will complete and fund any additional sewer separation and hydraulic relief work that may be necessary to bring the CSO discharges into agreement with the long-term levels of control.

The following are highlights of the progress MWRA and the CSO communities made on CSO control projects in the fourth quarter of 2008.

- MWRA continued to make scheduled progress with construction of the \$149 million North Dorchester Bay CSO storage tunnel. After completing the mining and lining of the 2.1-mile long soft-ground tunnel ahead of schedule in August, 2008, the contractor quickly disassembled and removed the tunnel boring machine from the retrieval shaft near the State Police building. The contractor also immediately began drilling the adits to connect the tunnel to the drop shaft at each of the CSO and stormwater outfalls that will remain in service for the long-term. Since then, the contractor has completed the adits and is removing construction support systems from the tunnel. The contractor continues to make substantial progress with construction of the CSO and stormwater diversion structures and related near-surface piping at the outfalls. Meanwhile, MWRA is preparing two more construction contracts to complete the project. MWRA expects to advertise the contract for the dewatering pump station and force main within a few weeks and plans to advertise the contract for the remote odor control facility in Spring 2009.
- MWRA also made design and construction progress with the \$88.4 million East Boston Branch sewer relief project since issuing the notice to proceed with the \$59.9 million second contract (micro-tunneling) in July 2008. While the contractor has submitted proposed changes and requests for schedule extensions, MWRA believes the contractor can bring the contract and project to substantial completion by June 2010. MWRA is also completing design work for the third and last contract (pipe-bursting) and plans to advertise this contract in early 2009.

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- MWRA also made progress with the \$1,976,000 construction contract for the Brookline Connection and Cottage Farm Overflow Connection and Gate Control project since issuing the notice to proceed in June 2008.
- 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 has completed the Final Hydraulic Modeling Technical Report for the Charles River Valley/South Charles Relief Sewer Gate Controls and Additional Interceptor Connections project and is now preparing the preliminary design report and the report on additional interceptor connections that Schedule Seven requires MWRA to submit to EPA and DEP by January 2009. BWSC issued the notice to proceed with the construction contract for the \$10.2 million Bulfinch Triangle Sewer Separation project in September 2008, and the Town of Brookline issued the notice to proceed with the first of two construction contracts for the \$23.5 million Brookline Sewer Separation project in November 2008, both in compliance with Schedule Seven.
- BWSC continued to make progress with design of the Reserved Channel sewer separation project, which has climbed in estimated cost from \$54 million to \$113 million since the project was added to Schedule Seven in 2006. BWSC recently completed a contract packaging and phasing plan for this large and complex project that includes five sewer separation contracts, a sewer rehabilitation contract, a downspout disconnection contract, and two final paving contracts. BWSC plans to award the contracts over a five-year period beginning in Spring 2009. All work is scheduled to be complete by December 2015, in compliance with Schedule Seven.
- As anticipated in last quarter's report, the City of Cambridge issued a notice to proceed with design work in October 2008 for three projects associated with the \$117 million Alewife Brook CSO control plan (including \$60 million MWRA cost share). The three projects are CAM004 stormwater outfall and basin; CAM400 manhole separation; and interceptor connection relief and floatables control at CAM002 and CAM401B and floatables control at CAM001. Cambridge was able to commence these designs following resolution of citizens' appeals of a wetlands permit issued by the Department of Environmental Protection and agreement reached by Cambridge and MWRA this past summer on a plan, schedule and cost share to implement the revised Alewife Brook Sewer Separation plan.

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2. Project Implementation

2.1 MWRA-Managed Projects

North Dorchester Bay Tunnel and Related Facilities

MWRA continued to make scheduled progress with construction of the CSO storage tunnel. The contractor has completed the adits to connect the tunnel to the five drop shafts earlier constructed at the CSO and stormwater outfalls that will remain in service for the long-term: BOS081, BOS082, BOS084, BOS085 and BOS086. The contractor has also begun to remove the rail system, electric supply lines and ventilation system from the tunnel. This month, the contractor will complete the removal of construction staging and equipment from the tunnel, and will prepare and clean the tunnel for MWRA final acceptance.

Closer to the ground surface, the contractor has made substantial progress with construction of the CSO and stormwater diversion chambers and related near-surface piping at outfalls BOS081, BOS082 and BOS084, after completing the diversion chambers at outfalls BOS085 and BOS086 earlier this year. The contractor laid final paving to restore Babe Ruth Drive and Columbia Road in the area of the BOS085 and BOS086 construction. While the contractor earlier completed installing the new drainage system upstream of outfall BOS086 from Moakley Park to Logan Way, the installation of the drainage system along Logan Way continues to be delayed pending redesign to avoid subsurface utilities and related hazardous material.

In addition, the contractor has begun to line the retrieval shaft at the upstream end of the tunnel. When the tunnel becomes operational in 2011, this shaft will accept stormwater diverted from the BOS087 outfall, which will be closed, and will also be connected by piping to the remote odor control facility.

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. As reported last quarter, MWRA has split the pumping station/force main and the remote odor control facility into separate construction contracts.

MWRA's design consultant is finalizing the contract package for the pumping station and force main, and MWRA expects to advertise this contract for construction bids within the next few weeks. MWRA has received certain permits for the work, including a Grant of Location License from the Boston Public Improvement Commission and a wetlands Order of Conditions from the Boston Conservation Commission, and has

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applied for other permits, including a DEP Chapter 91 license and a construction permit from the Massachusetts Department of Conservation and Recreation (DCR), which controls lands where MWRA will construct the force main and the odor control facility. Article 97 legislation was obtained for all applicable elements of the North Dorchester Bay project in 2006, prior to tunnel construction. MWRA has also submitted construction documents to the Boston Fire Department and the Federal Aviation Administration for their reviews.

MWRA's design consultant is also preparing the contract documents for the remote odor control facility, which is the final construction package associated with the North Dorchester Bay CSO control plan. MWRA expects to advertise this contract in Spring 2009.

East Boston Branch Sewer Relief (BOS003-014)

MWRA completed the first construction contract to provide Interceptor Relief for BOS003-014 in East Boston in 2004, issued the notice to proceed with the second contract (Contract 6257) in July 2008, and is completing design of the third contract (Contract 6841).

At a cost of \$59.9 million, the construction contract currently underway (Contract 6257) is the largest of the three 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 along the East Boston streets.

In the last quarter of 2008, the contractor continued to conduct pre-construction surveys, set control points, and map out utilities with Dig Safe. The contractor has completed initial test pit excavations and has completed the layout or revised layout of micro-tunneling shafts along Chelsea Street, East Eagle Street, Condor Street and Border Street, including layout changes to address utility conflicts which would otherwise result in substantial schedule delays. The contractor holds utility coordination meetings with NSTAR, NationalGRID, Comcast, Verizon, MBTA, and BWSC to identify utility conflicts and plan mitigation on a case by case basis for each shaft location. Also in this period, the contractor and MWRA held a series of public meetings and meetings with the City of Boston Public Works Department to coordinate the construction work and gain a waiver from the City's winter moratorium on excavations (November to April) and allow 24/7 micro-tunneling activity to mitigate utility schedule delays.

Over the next quarter, the Authority will continue to evaluate the effects, including scheduling impacts, of construction changes that

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have been and may continue to be proposed by the contractor. Any extension of the contract duration will push the completion date for the interceptor relief project as a whole beyond the June 2010 milestone in Schedule Seven. In addition to utility conflicts, the Authority will continue to address any other potential work and schedule changes the contractor may propose, including changes that may arise from any impacts to the CSO work by other construction projects in the area, including projects being implemented by BWSC, Boston Public Works Department, Massachusetts Highway Department, NationalGrid and ConocoPhillips. At this time, the Authority believes that the contractor can bring the contract and project to substantial completion by June 2010.

Meanwhile, MWRA 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 "pipe-bursting" methods. MWRA's design consultant is finalizing the contract plans and specifications based on MWRA's review of the 100% documents that the consultant submitted in August. MWRA plans to advertise and award this final contract by Spring 2009.

**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 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 work to date has centered on constructing the piped interconnection between the two deep overflow chambers adjacent to the Cottage Farm facility. The contractor has completed the installation

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of geotechnical monitoring including groundwater monitoring wells, settlement markers and utility monitoring points. The contractor installed four deep wells and commenced dewatering to the Charles River this month, under an EPA NPDES permit and with a temporary groundwater treatment system.

The Contractor's earth support system calls for benching down to the top of the existing Cottage Farm overflow structures and installing excavation sheeting. Excavation for benching commenced in early December, but the results of pre-characterization sampling required to determine disposal are pending, and the tightness of the construction area prevents significant on-site stockpiling. The work site and construction are constrained by major reconstruction of the adjacent DCR park. The contractor has suspended further excavation until the sampling results are available and a disposal plan is completed. Excavation support sheeting is presently stored on site.

Over the next quarter, the contractor plans to dispose of stockpiled soil, complete the excavation to the top of existing overflow structures, install sheeting, complete the excavation to sub-base (more than 30 feet below grade), install and test the new pipe connection between the overflow chambers, and backfill. The contractor also plans to commence construction activity at the junction chamber on the Boston side of the Charles River and at the two remote flow monitoring sites concurrent with completing the work adjacent to the Cottage Farm facility.

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.

**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

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further reduce CSO discharges, in accordance with a January 2009 milestone in Schedule Seven.

MWRA's design consultant submitted the Final Geotechnical and Hazardous Materials Report in November 2008. In response to MWRA's review of the Draft Hydraulic Modeling Technical Report received in August 2008, the consultant conducted additional hydraulic model runs and submitted supplemental hydraulic analyses in November. The Final Hydraulic Modeling Technical Report is due late this month, along with the draft report on the consultant's evaluation of additional Charles River interceptor interconnections and the draft preliminary design report.

2.2 Community-Managed Projects

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 the installation of the 12-foot by 12-foot box culvert from south to north near Mt Vernon Street. Installation of particle separator "A" is complete and the contractor has begun installation of particle separator "B." The particle separators will provide a level of treatment to the stormwater flows prior to discharge to Savin Hill Cove. The contractor has completed excavation and dredging of the outfall basin in Savin Hill Cove and has begun to install rip rap along the shore and topping stone within the dredged basin. The contractor has also begun the excavation for twin 9-foot by 8-foot culverts between Manhole "A" and Savin Hill Cove.

The contract's 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.

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BWSC is continuing with final design and has provided MWRA the 50% design drawings for the first of nine planned construction contracts, including five sewer separation contracts, a sewer rehabilitation contract, a downspout disconnection contract and two final paving contracts. BWSC's project schedule calls for the first sewer separation contract to be advertised by January 2009 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.

In compliance with Schedule Seven, BWSC issued the Notice to Proceed with the sole construction contract on September 25, 2008, with a construction start date of September 29. Construction activities to date included gas main relocation in advance of the separation work, installation of a temporary water line bypass system, and installation of a 12-inch water main in Lancaster Street. The contract completion date is July 8, 2010.

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 MWRA's Cottage Farm facility.

The project comprises two construction contracts. The Town of Brookline awarded contract 1 in the amount of \$1.4 million and issued the notice to proceed on November 21, 2008, in compliance with Schedule Seven. The contract completion date is November 24, 2009.

The much larger second construction contract, which Brookline plans to advertise in Spring 2009, includes installation of sanitary sewers in Beacon Street, St. Mary's Street, and Monmouth Street. Brookline recently submitted the 75% design drawings to MWRA for review.

Cambridge/Alewife Brook Sewer Separation

As reported last quarter, MWRA and the City of Cambridge reached agreement on a plan, schedule and cost share to implement the Alewife Brook Sewer Separation plan. On November 5, 2008, MWRA and Cambridge

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executed amendments to their CSO Memorandum of Understanding and Financial Assistance Agreement to incorporate the full scope of the Alewife Brook plan and authorize MWRA funding for the eligible design and construction costs in accordance with the negotiated agreement.

The City of Cambridge commenced design services for three of the five projects that comprise the Alewife Brook CSO plan (stormwater basin and outfall, CAM400 common manhole separation, and interceptor connection relief and floatables control) on October 30, 2008. These projects have been delayed a total of 27 months beyond their respective design and construction milestones in Schedule Seven due to the citizens' appeals of wetlands permits issued by the Cambridge Conservation Commission and DEP 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 plans to commence design by April 2011.