

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, 2010

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from June 16, 2010 to September 15, 2010 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 June 2010 on the Court's Schedule Seven, certified by Frederick A. Laskey, Executive Director of the Authority, is attached hereto as Exhibit "A."

A. Activities Not Completed.

1. Interceptor Relief for BOS003-014.

As anticipated, the Authority reached substantial completion of construction of the complex and difficult East Boston Branch Sewer Relief project (Interceptor Relief for BOS003-014) in July 2010, within one month of the June 2010 milestone in Schedule Seven.<sup>1</sup> This project was one of the most difficult combined sewer overflow ("CSO") control projects to implement due to conflicts with other utilities and other major construction activities in the area. The Authority and the contractor were able to compress the construction schedule to minimize delays due to the conflicts by changing the number and layout of tunnel shafts for the relief sewer, working in winter months and adding a third tunneling shift. As a result of these mitigating efforts, the contractors were able to complete the recent work within the original contract durations.

The project consisted of three construction contracts: Contract 1, the \$5.2 million rehabilitation of the main trunk line along Bremen and Chelsea

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<sup>1</sup> See Compliance and Progress Reports dated June 15, 2010, pp. 2-5; March 15, 2010, pp. 7-9; March 16, 2009, pp. 7-9; December 15, 2008 pp. 6-8; September 15, 2008, pp. 3-5; and June 13, 2008, pp. 3-5 for previous reports on Interceptor Relief for BOS003-014.

Streets, Contract 2, the \$62.2 million installation of 2.5 miles of new sewer interceptor along Border, Condor, East Eagle and Chelsea streets and replacement sewers along Marginal, Orleans and Bremen streets, primarily using micro-tunneling methods and Contract 3, the \$8.5 million replacement and upgrade of approximately one mile of interceptor sewers in the upstream reaches of the Authority's East Boston sewer system, along Marginal, New, Maverick, Border and Jefferies streets, primarily using the pipe-bursting method. The Authority completed the first of these contracts in 2004 and the latter two this past July. The project also included the installation of floatables controls at the CSO outfalls that remain active in the typical year. The contractor is currently working on completing punch list work and surface restoration of sidewalks and streets.

With substantial completion of this project, all of the new sewers are in service and the discharges from CSO outfalls BOS003-014 to Boston Inner Harbor, and the Mystic and Chelsea Rivers confluence are expected to be reduced from the 2004 revised baseline conditions of 31 activations and total volume of 41.15 million gallons in a typical year to six activations and a volume of 8.58 million gallons in a typical year, a 79 percent reduction in annual volume. With this level of control, the Authority predicted that CSO discharges would comply with Class B (fishable/swimmable) water quality standards more than 95 percent of the time.

B. Progress Report.

1. Combined Sewer Overflow Program.

a. Bulfinch Triangle Sewer Separation.

On July 13, 2010, Boston Water and Sewer Commission ("BWSC") completed construction of the \$10.0 million Bulfinch Triangle sewer separation project, three years ahead of the July 2013 milestone in Schedule Seven. The project included the separation of combined sewer systems in a 14-acre area of Boston bounded by North Station, Haymarket Station, North Washington Street, and Cambridge Street. The separation work has also allowed BWSC to remove the storm drain systems serving a previously separated 47-acre area of Government Center from the combined sewer system, for a total separation area of 61 acres.

Due to BWSC's efforts, the benefits of this project were realized much earlier than anticipated, including the reduction of CSO flows to the Charles River and the Prison Point CSO treatment facility. As part of this project, BWSC modified and closed a gate at CSO outfall BOS049 that has eliminated CSO discharges at Outfall BOS049 and isolated the new BWSC storm drain system so that this outfall now discharges stormwater only.

b. North Dorchester Bay Storage Tunnel and Related Facilities.

Regarding the \$26.0 million tunnel dewatering pumping station at Massachusetts Port Authority's Conley Terminal and associated force main, the contractor completed installation of the 3,200-foot long, 24-inch diameter force main and installation of a 30-inch PVC pipe to upsize a BWSC gravity sewer on

N Street. The contractor also completed the placement of concrete for the exterior and interior, below-grade walls of the pump station, the floor beams and the slab on grade and has commenced masonry work on the above-grade walls.

With respect to the \$5.2 million construction contract for the below-ground tunnel ventilation building that is being constructed at the upstream end of the tunnel, the contractor has completed placement of the concrete exterior and interior wall structures and commenced installation of the roof beams and placement of the roof slab just below ground level. Once the roof slab is completed, the contractor will waterproof the exterior walls, backfill the building, and install the vent shafts.

The Authority remains on schedule to complete all work and bring the North Dorchester Bay CSO storage tunnel and related facilities into service by May 2011, in compliance with Schedule Seven.

c. Cambridge Sewer Separation.

Since last reporting, the City of Cambridge made significant progress with the single construction contract that combines two of the five projects in the Authority's CSO control plan for Alewife Brook: (i) the CAM400 Manhole Separation project and (ii) the Interceptor Relief and Floatables Controls at CAM002 and CAM401B and Floatables Control at CAM001 project.

Cambridge's contractor has completed the subsurface work of the CAM400 Manhole Separation project on Whittemore Avenue and Kassul Park and has completed 40 percent of the work along Harrison Avenue. Gas main

relocations and replacements within the CAM 400 area are complete, and the combined sewer manhole replacement at the intersection of Magoun Street and Massachusetts Ave. is approximately 95-percent complete. Subsurface work will continue on WR Grace Property, Kimball Street, Columbus Avenue, Seagrave Road, Magoun Street, Madison Avenue, and at the sewer installation that crosses Alewife Brook Parkway. Cambridge anticipates that it will be able to achieve substantial completion of this project by March 31, 2011, as scheduled.

Relative to the interceptor connection and floatables control work of the contract, the construction at Outfall CAM 002 at the intersection of Massachusetts Avenue and Alewife Brook Parkway is approximately 30-percent complete. Excavation and installation of piles and the cast-in-place footings and walls for the six-foot by six-foot and eight-foot by eight-foot precast diversion structures for CAM002 are complete. Cambridge expects to commence the installation of the six-foot by six-foot and eight-foot by eight-foot precast diversion structures and the cutting and connection to the Authority's 66-inch diameter sewer and a new pre-cast regulator structure this month. The contractor has installed the temporary flow bypass needed for construction at Outfall CAM401B and has commenced work for the interceptor connection relief at this location. Work at Outfall CAM 001 is scheduled to begin after the completion of the CAM 002 and CAM 401B work. Cambridge anticipates that it will be able to substantially complete this project by October 31, 2010, as scheduled.

Cambridge also continued efforts to obtain the remaining necessary construction and long-term maintenance easements from private and public land owners for the CAM004 wetland basin and stormwater outfall (Contract 12) project. On August 9, 2010, a significant milestone was met when the Governor of the Commonwealth of Massachusetts signed legislation pursuant to Article 97 of the Massachusetts Constitution allowing the transfer of easements to Cambridge on state land within the Alewife Brook Reservation managed by the Department of Conservation and Recreation. Cambridge also obtained construction permits from DCR, 8(m) permits from the Authority, and permits for railroad crossings from the Massachusetts Bay Transportation Authority.

Cambridge is continuing its negotiations with two private property owners to secure the remaining necessary easements for the new stormwater outfall. The negotiations for one of the properties have become more complicated and difficult with the pending sale of the property to another private party. The other property easement is in final review with the owner and expected to be executed by the end of September. Pursuant to State Revolving Loan Fund regulations, all easements must be secured for Massachusetts Department of Environmental Protection ("DEP") to authorize the City of Cambridge to award the contract and commence construction. Further delay in reaching and formalizing an easement agreement with the last private property owner is delaying the start of construction day for day.

Due to the difficulty in obtaining all of the necessary permits and negotiating certain private property easements, Cambridge was unable to award and issue the notice to proceed with construction by the end of July 2010 as it originally proposed and has revised its construction dates for Contract 12 by two months. It now hopes to commence construction by September 30, 2010 and complete construction by September 2012, holding to the original 24-month construction duration. Further delay in securing the last easements on private property will continue to set back the start of construction of Contract 12 and affect the schedules for later Alewife Brook projects that depend on Contract 12.

The Authority plans to finalize discussions with the United States and the DEP on Cambridge's proposed schedule once Cambridge issues the notice to proceed with construction of Contract 12.

d. Charles River Valley Sewer/ South Charles River Relief Sewer Gate Controls.

As reported last quarter, the Authority provided more information to the United States Environmental Protection Agency ("EPA") and DEP about the previous technical evaluations that it conducted on the feasibility of implementing Charles River Valley Sewer/South Charles River Relief Sewer Gate Controls in response to EPA's comments upon its previous evaluations.<sup>2</sup> The results of the evaluations support the Authority's conclusion that there are

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<sup>2</sup> See Compliance and Progress Reports dated June 15, 2010, pp. 6-7; March 15, 2010, pp. 2-3; December 15, 2009, pp. 4-6; September 15, 2009, pp. 7-9; June 15, 2009, pp. 10-11; and March 16, 2009, pp. 2-3 for previous reports on Charles River CSO interceptor optimization evaluations.



no interceptor optimization improvements that will decrease CSO discharges to the Charles River without increasing the risk of system flooding.

On September 9, 2010, the Authority received correspondence from EPA in response to the June 15 submission, in which EPA states it continues to believe there is the potential to capture meaningful CSO control benefit from additional optimization of the system. Specifically, EPA requests that "MWRA investigate additional controls in the form of either "active" controls or proportional flow devices such as a bendable weir, such that flow control benefits would be captured in the typical year (and) would revert to lower levels of control at some point greater than the 2-year storm and less than the 5-year storm." The Authority will report further in its next compliance and progress report.

e. Brookline Sewer Separation.

As previously reported, the Town of Brookline completed the installation of new storm drains in the first of two construction contracts for the \$26.6 million Brookline sewer separation project. On July 28, 2010, Brookline advertised the second, much larger construction contract at an estimated cost of \$24.2 million and expects to receive the bids on September 23, 2010. Brookline expects to issue a notice to proceed with construction this fall and to complete all work two years later, ahead of the July 2013 milestone in Schedule Seven. This project involves separation of sewers in several areas of Brookline, totaling 72 acres, where there are remaining combined sewers

tributary to the Authority's Charles River Valley Sewer. This project is intended to reduce discharges to the Charles River at the Cottage Farm facility.

f. Quarterly CSO Progress Report.

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

By its attorneys,

/s/ John M. Stevens

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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, 2010:

/s/ John M. Stevens

John M. Stevens (BBO No. 480140)

jstevens@foleyhoag.com

Dated: September 15, 2010

# **EXHIBIT A**

SCHEDULE SEVEN

MWRA MONTHLY COMPLIANCE REPORT

June, 2010

EXHIBIT "A"

LONG-TERM

SLUDGE MANAGEMENT

NEW BOSTON HARBOR  
SECONDARY  
TREATMENT PLANT

MONTH/YEAR

CSO CONTROL

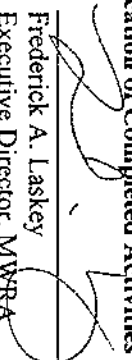
June 2010

MWRA to complete construction of interceptor relief for BOS003-014.

(Completed July 30, 2010)

Certification of Completed Activities

By:

  
Frederick A. Laskey  
Executive Director, MWRA

Date: September 15, 2010

**EXHIBIT B**

Massachusetts Water Resources Authority



Combined Sewer Overflow  
Control Plan

Quarterly Progress Report  
September 15, 2010

Massachusetts Water Resources Authority  
Combined Sewer Overflow Control Plan  
Quarterly Progress Report - September 2010

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**Table 1**  
**Status of CSO Project Implementation**  
**September 15, 2010**

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	
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				
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				
Brookline Connection and Cottage Farm Overflow Interconnection and Gate				
Charles River Interceptor Gate Controls and Additional Interceptor Connections		X		
Optimization Study of Prison Point CSO Facility				
<b>Community Managed Projects</b>				
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				
Reserved Channel Sewer Separation		X	X	
Bulfinch Triangle Sewer Separation				
Brookline Sewer Separation		X	X	
Somerville Baffle Manhole Separation				
Cambridge/Alewife Brook Sewer Separation	CAM004 Outfall and Basin	X		
	CAM004 Sewer Separation	X <sup>(1)</sup>	X <sup>(1)</sup>	
	CAM400 Manhole Separation		X	
	Interceptor Connection Relief/Floatables		X	
MWR003 Gate and Rindge Ave. Siphon		Start 6/12		
<b>Region-wide Floatables Control and Outfall Closings</b>				

<sup>(1)</sup> In 1997-2002, the City of Cambridge completed design and construction of four initial contracts to separate the CAM004 tributary area.

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Combined Sewer Overflow Control Plan  
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1. Quarterly Progress Overview

Massachusetts Water Resources Authority (MWRA) presents this quarterly progress report to comply with reporting requirements in the Federal District Court's Order in the Boston Harbor Case. For the remaining 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 16, 2010, to September 15, 2010, 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 2009, dated March 2010 (the "Annual Report"). The Annual Report is available for public viewing 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 in MWRA's long-term CSO control plan referenced in Schedule Seven. As shown in Table 1, MWRA and its CSO communities have completed 26 of the 35 projects, including two projects completed in the past quarter. In July 2010, Boston Water and Sewer Commission (BWSC) attained substantial completion of the Bulfinch Triangle Sewer Separation project, and MWRA attained substantial completion of the East Boston Branch Sewer Relief project (Interceptor Relief at BOS003-014).

Six of the nine projects not complete are in the construction phase. Construction is ongoing and well underway for North Dorchester Bay Storage Tunnel and Related Facilities (by MWRA), Reserved Channel Sewer Separation (by BWSC), and two of the five projects in the CSO control plan for Alewife Brook, including CAM400 Manhole Separation and Interconnection Relief and Floatables Control (both by City of Cambridge). In addition, the Town of Brookline completed the first of two construction contracts for the Brookline Sewer Separation project earlier this year and advertised the second, much larger, construction contract on July 28, 2010. The ninth project shown in Table 1 as "in construction" (as well as "in design") is CAM004 Sewer Separation, for which the City of Cambridge completed early construction contracts several years ago and plans to award additional construction contracts beginning in 2012.

The three projects not yet in construction include two Alewife Brook CSO projects, as well as a Charles River project that MWRA has recommended be deleted from the Long-Term Control Plan and Schedule Seven. Regarding the Alewife projects, the City of Cambridge hopes to

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commence construction of the CAM004 Stormwater Outfall and Basin project by the end of this month, and MWRA plans to commence design of MWR003 Gate, Rindge Ave. Siphon Relief and Interceptor Connection Relief and Floatables Control in 2012. MWRA recommends deleting the Charles River Interceptor Gate Controls and Additional Interceptor Connections project, which is discussed on page 5.

2. Quarterly Progress Highlights

- MWRA continued to make scheduled progress with the last two (of five) construction contracts for the \$269 million North Dorchester Bay CSO storage tunnel and related facilities. The \$26.0 million contract for the tunnel dewatering pumping station at Massport's Conley Terminal and associated force main and the \$5.2 million contract for the tunnel ventilation building are on schedule for substantial completion in May 2011, in compliance with Schedule Seven.
- As expected, MWRA attained substantial completion in July 2010 on the remaining two (of three) construction contracts for the East Boston Branch Sewer Relief project (Interceptor Relief for BOS003-014), including the \$62.5 million microtunneling contract and the \$8.5 million pipebursting contract. All related facilities are in service.
- In July, BWSC attained substantial completion of the sole construction contract for the \$10.0 million Bulfinch Triangle Sewer Separation project. With completion of the project, CSO discharges are reduced at the Prison Point CSO Facility and other outfalls and eliminated at Outfall BOS049, which is now used by BWSC to discharge the stormwater separated from the sewer system to the Charles River.
- BWSC continues to make progress with the first of nine planned construction contracts for the \$73.7 million Reserved Channel Sewer Separation project. BWSC received bids on three additional construction contracts and has advertised a fifth contract. BWSC continues to make progress with final design of the remaining four contracts.
- As previously reported, the Town of Brookline completed the installation of new storm drains in the first of two construction contracts for the \$26.6 million Brookline Sewer Separation project. Brookline advertised the second, much larger contract on July 28, 2010, and expects to receive construction bids on September 23, 2010.

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- Cambridge continues to make progress with the \$3.9 million single construction contract that includes two of the five projects included in the \$117 million CSO control plan for Alewife Brook: the CAM400 Manhole Separation project and the Interconnection Relief and Floatables Control project. On July 1, 2010, Cambridge received construction bids for the CAM004 Stormwater Outfall and Wetland Basin (Contract 12), and Cambridge has since issued a Letter of Intent to Award Contract 12 in the low bid amount of approximately \$14.8 million. In addition, on August 9, 2010, the Governor of the Commonwealth of Massachusetts signed legislation pursuant to Article 97 of the Massachusetts Constitution allowing the transfer of easements to Cambridge on state land within the Alewife Brook Reservation managed by the Department of Conservation and Recreation. Cambridge hopes to complete its negotiations for remaining easements on private property and issue Notice to Proceed with Contract 12 by September 30, 2010, two months later than last reported (see pp. 8-9).
- On August 16, 2010, BWSC issued Notice Proceed with the \$6.0 million construction contract for relocation of CSO regulator RE-070/11-2 and sewer separation in a portion of the South Bay area associated with BWSC's Lower Dorchester Brook Sewer. The work is funded in part by MWRA and is intended to lower CSO discharges to BWSC's Dorchester Brook Conduit and help attain the level of CSO control in MWRA's long-term control plan for Fort Point Channel.
- As previously reported, BWSC completed the South Dorchester Bay Sewer Separation project and closed all CSO regulators tributary to South Dorchester Bay in 2007. BWSC continues to pursue additional stormwater inflow removal (i.e. downspout disconnections) from the sanitary sewer system, in order to mitigate the remaining risks of sewer system flooding in large storms. As reported last quarter, BWSC advertised a Request for Proposals for associated design services on April 21, 2010, and received proposals on May 20, 2010. BWSC is currently negotiating the final contract with the selected firm and expects to award the contract and issue Notice to Proceed in October 2010.
- On June 15, 2010, MWRA submitted additional technical information to the U.S. Environmental Protection Agency, Region 1, (EPA) and the Massachusetts Department of Environmental Protection (DEP) regarding MWRA's engineering study of the Charles River Valley/South Charles Relief Sewer Gate Controls and Additional Interceptor Connections in response to EPA comments. MWRA continues to conclude that no interceptor optimization alternative can appreciably reduce CSO discharges at the Cottage Farm CSO Facility or at other hydraulically related CSO outfalls to the Charles River beyond the

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levels of control in MWRA's approved long-term control plan without raising the hydraulic grade lines in the sewer system to unacceptable levels. Meanwhile, the \$94 million set of CSO projects necessary to attain the levels of CSO control for the Charles River in MWRA's Long-Term Control Plan and the Second CSO Stipulation of the Court Order is complete save for the Brookline Sewer Separation project, which is in construction.

3. Project Implementation Progress

3.1 MWRA-Managed Projects

North Dorchester Bay Tunnel and Related Facilities

MWRA continues to make progress with the remaining two of five construction contracts that comprise the \$269 million North Dorchester Bay CSO Control Plan. The contracts completed earlier include Pleasure Bay Storm Drain Improvements, which MWRA completed in March 2006, the Morrissey Boulevard Storm Drain, which BWSC completed in July 2009, and the North Dorchester Bay CSO Storage Tunnel, which MWRA completed in November 2009 (aside from punch list items and surface restoration, which continue).

The contractor for the \$26.0 million tunnel dewatering pumping station at Massachusetts Port Authority's Conley Terminal and associated force main completed the installation of the 3,200-foot long, 24-inch diameter force main including the connection to the pumping station. The contractor also completed installation of the 640-foot long, 30-inch diameter PVC pipe to upsize a BWSC gravity sewer on N Street to accept the force main flows. At the pumping station, the contractor completed the placement of concrete for the exterior and interior below grade walls, the floor beams, and the concrete slab on grade, backfilled most of the annular space between the facility substructure and the slurry wall, and recently commenced masonry work on the above-grade station walls.

The contractor for the \$5.2 million construction contract for the below-ground tunnel ventilation building that is being constructed at the upstream end of the tunnel completed placement of the concrete exterior and interior walls and commenced installation of the roof beams and placement of the roof slab. Once the roof slab is complete, the contractor will waterproof the exterior walls, backfill the below-ground structure, and install the vent shafts. Installation of equipment within the building will follow.

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The Authority remains on schedule to complete all work and bring the North Dorchester Bay CSO storage conduit and related facilities into service by May 2011, in compliance with Schedule Seven.

East Boston Branch Sewer Relief (BOS003-014)

The Authority attained substantial completion of the \$88.0 million East Boston Branch Sewer Relief project (Interceptor Relief for BOS003-014) in July 2010, within one month of the June 2010 milestone in Schedule Seven. The project consisted of three construction contracts, including the \$5.2 million rehabilitation of the main trunk line along Bremen and Chelsea streets that the Authority completed in 2004 and the two major contracts completed this past July: the \$62.2 million installation of 2.5 miles of new sewer interceptor along Border, Condor, East Eagle and Chelsea streets and replacement sewers along Marginal, Orleans and Bremen streets, primarily using micro-tunneling methods; and the \$8.5 million replacement and upgrade of approximately one mile of interceptor sewers in the upstream reaches of the Authority's East Boston sewer system, along Marginal, New, Maverick, Border and Jefferies streets, primarily using the pipe-bursting method. The project also included the installation of floatables controls at the CSO outfalls that remain active in the typical year, and minor work continues at certain CSO regulator structures to complete the floatables control installations.

MWRA has accepted the completed relief sewers and placed all in beneficial service, providing for full attainment of the expected long-term levels of CSO control at the East Boston outfalls.

Charles River Interceptor Gate Controls  
and Additional Interceptor Connections

On June 15, 2010, MWRA submitted additional technical information to EPA and DEP regarding MWRA's engineering study of the Charles River Valley/South Charles Relief Sewer Gate Controls and Additional Interceptor Connections, in response to remaining EPA comment. The additional information addressed the feasibility of implementing a sewer system change or operational improvement that might result in further lowering CSO discharges to the Charles River, especially treated discharges at MWRA's Cottage Farm CSO Facility, while providing necessary hydraulic relief in large storms to avoid system flooding. MWRA continues to conclude that no interceptor optimization alternative can appreciably reduce CSO discharges at the Cottage Farm CSO Facility or hydraulically related CSO outfalls to the Charles River beyond the levels of control in MWRA's approved long-term control plan without increasing the risk of system flooding in large storms.

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3.2 Community-Managed Projects

Reserved Channel Sewer Separation

The \$73.7 million Reserved Channel Sewer Separation project is intended to minimize CSO discharges to the Reserved Channel by separating combined sewer systems in a 365-acre area of South Boston tributary to CSO Outfalls BOS076, BOS078, BOS079 and BOS080. Implementation of the sewer separation plan will reduce the number of CSO activations to the Reserved Channel from 37 to three events in a typical year.

The work includes the installation of approximately 42,000 feet of new storm drains. The project also includes the rehabilitation of the four CSO outfalls to ensure they will have the hydraulic capacity to deliver the separated stormwater flows, as well as remaining CSO flows, to the Reserved Channel for the long term. BWSC proposes nine, phased construction contracts for this project, including four sewer separation contracts, an outfalls rehabilitation contract, a sewer rehabilitation contract, a downspout disconnection contract, and two final paving contracts.

BWSC issued the Notice to Proceed with the first construction contract on May 26, 2009, in compliance with Schedule Seven. This contract involves the installation of storm drains and removal of stormwater flows from the combined sewer system tributary to Outfall BOS080, one of four CSO outfalls that discharge to the Reserved Channel. The contractor has installed approximately 80 percent of the storm drains included in this contract, which is scheduled to be completed in 2011.

BWSC expects to issue notices to proceed with three additional construction contracts this fall. BWSC received contractors' bids for a roadway resurfacing contract on June 29, 2010, for the outfalls rehabilitation contract on July 7, 2010, and for a contract to separate sewers in the service area tributary to Outfall BOS076 on August 12, 2010.

In addition, BWSC is nearing completion of final design of the fifth construction contract, which involves sewer separation in the service area tributary to outfalls BOS078 and BOS079, and plans to advertise the contract in the fall of 2010. In the meantime, BWSC continues to make scheduled progress with final design of the remaining four contracts, which BWSC plans to award sequentially through April 2013. The project schedule calls for all work to be completed by December 2015, in compliance with Schedule Seven.

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Bulfinch Triangle Sewer Separation

The goal of the Bulfinch Triangle sewer separation project is to minimize CSO discharges to the Charles River by separating combined sewer systems in the area of Boston roughly bounded by North Station, Haymarket Station, North Washington Street, Cambridge Street and immediate environs. The project also allows stormwater carried by already existing separate storm drains in the Government Center area to be removed from downstream combined sewer connections and redirected to the Charles River.

BWSC issued Notice to Proceed with the sole construction contract for this project in September 2008. On August 16, 2010, BWSC informed MWRA that the contract was substantially complete as of July, well in advance of the July 2013 milestone in Schedule Seven. The project has reduced CSO discharges at the Prison Point CSO Facility and other outfalls to the Charles River and Boston Inner Harbor. The project has also eliminated CSO discharges at BWSC Outfall BOS049, which has been isolated from the combined sewer system and now carries the separated stormwater to the Charles River.

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 project includes two construction contracts. Construction Contract 1 includes the installation of storm drains north and south of Beacon Street. Brookline issued the Notice to Proceed for this \$1.4 million contract November 2008, in compliance with Schedule Seven. As previously reported, the storm drain installation is complete. The contractor has also completed final paving. The contractor is completing punch list items.

Brookline completed the design of the second and much larger separation contract, which has an estimated value of \$24 million. The second contract involves micro-tunneling along Beacon Street to install new sewers at significant depths, installation of sewers on Monmouth, St Mary's, and Carlton Streets, as well as the construction of several special structures that will connect the new sewers with the existing laterals. Main trunk combined sewers will be converted to storm drains.

MWRA approved the Contract 2 bid documents and issued two 8(m) permits and six direct connection permits for the work. Brookline advertised



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the contract on July 28, 2010, with a bid opening date of September 23, 2010. Brookline expects to issue the notice to proceed with construction this fall and to complete all work two years later, ahead of the July 2013 milestone in Schedule Seven.

Meanwhile, after completing internal inspections of CSO Outfall MWR010, MWRA is now scoping design services associated with the cleaning of sediments from the outfall and the removal of the old tide gate structures. Upon completion of the Brookline Sewer Separation project, Outfall MWR010 will convey the separated Brookline stormwater to the Charles River.

Cambridge/Alewife Brook Sewer Separation

The Alewife Brook CSO control plan is intended to minimize CSO flows to Alewife Brook primarily by separating combined sewer systems in parts of Cambridge, but also by upgrading hydraulic capacities at local connections to MWRA interceptors. A new stormwater outfall and wetland basin (Cambridge's Contract 12) will be constructed to accommodate the separated stormwater flows, prevent any increase in flooding along Alewife Brook, and provide a level of stormwater treatment.

The City of Cambridge continued to make progress with the single construction contract that combines two of the five projects in the Authority's CSO control plan for Alewife Brook: the CAM400 Manhole Separation project and the Interceptor Relief and Floatables Controls at CAM002 and CAM401B and Floatables Control at CAM001 project. Cambridge's contractor has completed the subsurface work of the CAM400 Manhole Separation project on Whittemore Avenue and Kassul Park and has completed 40 percent of the work along Harrison Avenue. Gas main relocations and replacements within the CAM 400 area are complete, and the combined sewer manhole replacement at the intersection of Magoun Street and Massachusetts Ave. is approximately 95 percent complete. Subsurface work will continue on WR Grace Property, Kimball Street, Columbus Avenue, Seagrave Road, Magoun Street, Madison Avenue, and at the sewer installation that crosses Alewife Brook Parkway. This work is expected to be complete by the end of this year.

Relative to the interceptor connection and floatables control work of the contract, the construction at Outfall CAM 002 at the intersection of Massachusetts Avenue and Alewife Brook Parkway is approximately 30 percent complete. Excavation and installation of piles and the cast-in-place footings and walls for the six-foot by six-foot and eight-foot by eight-foot precast diversion structures for CAM002 are complete. Cambridge expects to commence the installation of the six-foot by six-foot and eight-foot by eight-foot precast diversion

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structures and the cutting and connection to the Authority's 66-inch diameter sewer and new pre-cast regulator structure this month. The contractor has installed the temporary flow bypass needed for construction at Outfall CAM401B and has commenced work for the interceptor connection relief at this location. Work at Outfall CAM 001 is scheduled to begin after the completion of the CAM 002 and CAM 401B work. The contract calls for substantial completion of this work by October 2010.

Cambridge also continued efforts to obtain the remaining necessary construction and long-term maintenance easements from private and public land owners for the CAM004 wetland basin and stormwater outfall (Contract 12) project. Cambridge was able to obtain Article 97 legislation for its proposed facilities within the Department of Conservation and Recreation's (DCR) Alewife Brook Reservation, as well as construction permits from DCR, 8(m) permits from the Authority, and the necessary permits for railroad crossings from the Massachusetts Bay Transportation Authority.

Cambridge is continuing its negotiations with two private property owners to secure the remaining necessary easements for the new stormwater outfall. The negotiations for one of the properties have become more complicated and difficult with the owner's pending sale of the property to another private party. The other property easement is in final review with the owner and expected to be executed by the end of September. Pursuant to State Revolving Loan Fund regulations, all easements must be secured for DEP to authorize the City of Cambridge to award the contract and commence construction. Further delay in reaching and formalizing an easement agreement with the last private property owner is delaying the start of construction day for day.

Due to the difficulty in obtaining all of the necessary permits and negotiating certain private property easements, Cambridge was unable to award and issue the notice to proceed with construction by the end of July 2010 as it originally proposed, and has revised its construction dates for Contract 12 by two months. It now hopes to commence construction by September 30, 2010 and complete construction by September 2012, holding to the original 24-month construction duration. Further delay in securing the last easements on private property will continue to push the start of construction of Contract 12 out and affect the schedules for later Alewife Brook projects that depend on Contract 12.