

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, 2010

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from September 16, 2010 to December 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

Schedule Seven activity for the month of November 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. Commence Construction of Control Gate and Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief.

The Authority was unable to complete design and commence construction of the control gate and floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief, which is one of the five projects that comprise the long-term combined sewer overflow ("CSO") control plan for Alewife Brook. This inability was due to delays associated with obtaining the state wetlands permit and the necessary construction and long-term maintenance easements from private and public land owners for the CAM004 wetland basin and stormwater outfall (City of Cambridge Contract 12) project.<sup>1</sup> In order for the Authority to finalize design and construct the Control Gate and Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief project, the City of Cambridge must first complete construction of the CAM004 wetland basin and

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<sup>1</sup> See Compliance and Progress Reports dated September 15, 2010, pp. 5-8; December 15, 2009, pp. 6-8; September 15, 2009, pp. 4-7; June 15, 2009 pp. 4-5; March 16, 2009, pp. 3-5; December 15, 2008, pp. 6-7; September 15, 2008, pp. 5-6; June 13, 2008 pp. 6-7; March 14, 2008, pp. 4-5; December 14, 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.

stormwater outfall and preliminary design of the CAM004 sewer separation project. The sequencing of Contract 12, the CAM004 sewer separation project and the control gate and floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief project in Schedule Seven and in the Authority's and Cambridge's currently proposed project schedules is necessary to avoid cumulative construction impacts and to take account of the system hydraulic conditions predicted from preliminary design to result from the CAM004 projects. Design of the CAM004 sewer separation project, which is currently underway, will provide this information to the Authority and will be incorporated into the design scope for the control gate and floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief project.

Cambridge is continuing efforts to obtain the remaining necessary easements and rights of entry ("ROE") from private and public land owners for the CAM004 wetland basin and stormwater outfall (Contract 12) project. The Massachusetts Department of Conservation and Recreation ("DCR") is in the process of granting easements and a right of entry to Cambridge, consistent with the Article 97 legislation enacted in August 2010. DCR and Cambridge have made substantial progress on the form of easements, and both the easements and ROE are close to execution. It is anticipated that these documents can be finalized by the middle of January. Negotiations with the property owner for 55 Wheeler Street/70 Fawcett Street are continuing, and Cambridge anticipates the

ROE will be executed by the end of December 2010. Negotiations for the long-term easements on these properties are in progress, and Cambridge anticipates that easements will be executed by the end of February 2011.

On the other hand, negotiations with the property owner for 125, 150, 180 and 180R Cambridge Park Drive were delayed when Cambridge learned in late September that the properties were in foreclosure. Cambridge had been negotiating with the owner for almost two years and had anticipated securing easements by the fall of 2010. However, those properties were recently sold at a foreclosure sale, and Cambridge immediately began easement and right of entry negotiations with the new owner, Barclays Capital. Barclays and Cambridge have exchanged comments on draft ROE and easements. Although prospects appeared positive for the granting of the ROE and easements, Barclays has raised issues that present problems for Cambridge and may slow the process. For example, Barclays has brought to the City's attention the existence of certain parking easements, previously granted upon the foreclosed parcels, which, depending upon their location, may require Cambridge to open separate negotiations with those easement holders. Cambridge is working on resolving these matters and obtaining the ROE and easements. Cambridge is cautiously optimistic that it will secure the necessary easements by the end of February 2011.

With these delays and anticipated schedules, the Authority believes that it will be able to commence design of the control gate and

floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief project by April 2012 in accordance with the schedule it proposed to the United States Environmental Protection Agency (“EPA”) and the Massachusetts Department of Environmental Protection (“DEP”) in September 2009.<sup>2</sup> When Cambridge secures the remaining easements and is able to move forward with construction of the CAM004 wetland basin and stormwater outfall project, the Authority is prepared to finalize its schedule for the commencement and completion of construction of the Control Gate and Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief project.

The Control Gate and Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief project includes relief of the 30-inch MWRA siphon that delivers overflows to Outfall MWR003, installation of an automated hydraulic relief gate at the overflow weir, and installation of floatables controls for outfall MWR003. The Authority has also added to this project hydraulic relief and floatables control for CSO outfall SOM01A. This project will be designed and constructed by the Authority as it is the only one of the five projects in the CSO control plan for Alewife Brook that includes elements dealing directly with Authority sewers, an Authority CSO outfall and a CSO outfall owned by the City of Somerville.

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<sup>2</sup> See December 15, 2009 Compliance and Progress Report at pp. 6-8.

B. Progress Report.

1. Combined Sewer Overflow Program.

a. Cambridge Sewer Separation.

The City of Cambridge continues to make scheduled 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. In October, the City substantially completed the Interceptor Relief and Floatables Controls at CAM002 and CAM401B and Floatables Control at CAM001 project in accordance with the schedule MWRA and Cambridge proposed to EPA and DEP in September 2009.

With respect to the CAM400 Manhole Separation project, Cambridge has completed the combined sewer manhole replacement at the intersection of Magoun and Massachusetts Avenue and at the crossing of Alewife Brook Parkway. In addition, Cambridge has completed approximately 90 percent of the subsurface work on Harrison Avenue and Columbus Avenue and 60 percent on Madison Avenue. The contractor has scheduled the subsurface work on the WR Grace Property, Kimball Street, Seagrave Road, and Magoun Street to be completed by February. Cambridge anticipates that it will be able to achieve substantial completion of this project by March 31, 2011, as previously proposed.

Cambridge selected a bidder and prepared the documentation to award Contract 12, but was unable to award the contract because Cambridge must secure all easements in order for the DEP to authorize the City of Cambridge to award the contract and commence construction in accordance with the Massachusetts Clean Water Revolving Fund regulations. As previously noted, Cambridge is continuing efforts to obtain the remaining necessary easements and rights of entry from private and public land owners for the CAM004 wetland basin and stormwater outfall (Contract 12) project. Cambridge hopes to be able to negotiate and finalize the remaining easements, submit the documentation to and receive approval from DEP, award Contract 12, and issue the notice to proceed with construction by the end of March 2011.

In an effort to mitigate further delay with commencement of Contract 12, Cambridge is working with the contractor in reviewing shop drawings and submittals to accelerate mobilization once the contract is signed. In addition, Cambridge plans to condense the construction duration of the CAM004 sewer separation project in order to maintain the proposed December 2015 construction completion date for the CAM004 sewer separation project, which is the last proposed project completion milestone for the Authority's CSO control plan for Alewife Brook. However, further delay in securing Contract 12 easements will continue to set back the start of construction of Contract 12 and may

affect the schedules for the CAM004 sewer separation project and the control gate and floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief project.

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

b. North Dorchester Bay Storage Tunnel and Related Facilities.

The contractor for the \$27.0 million tunnel dewatering pumping station at Massachusetts Port Authority's Conley Terminal and the associated force main previously completed the installation of the 3,200-foot long, 24-inch diameter force main, the connection to the pumping station and the 640-foot long, 30-inch diameter pipe to upsize a BWSC gravity sewer on N Street to accept the pumping station/force main flows. In the past quarter, the contractor completed the placement of temporary paving for East Broadway and N Street and the milling and placement of asphalt overlay from Day Boulevard to East Broadway related to the force main installation.

At the pump station, the contractor completed the placement of the concrete block walls that form the building and the installation of the low roof steel framing. The contractor continues work on the placement of the building facing and the installation of the plumbing, electrical, and fire protection systems. The contractor also completed the installation of



the 10-inch water main from the pump station to the water meter pit located on Farragut Street. The Authority received delivery of the tunnel-dewatering pumps on December 10.

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 installation of the waterproof membrane on the roof and removed the structural steel bracing from the excavation support system. The contractor continues with the installation of the plumbing and electrical systems and the backfilling of soil. The contractor expects that the motor control center and odor control vessels will be delivered by the middle of January.

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. Brookline Sewer Separation.

The Town of Brookline received bids on the second of the two construction contracts that comprise the \$ 22.7 million Brookline sewer separation project and selected the lowest responsive bidder. In accordance with the Massachusetts Clean Water Revolving Fund regulations, Brookline submitted the documentation to DEP and is awaiting authorization from DEP prior to awarding the contract. This contract involves the separation of sewers in areas of Brookline where there are remaining combined sewers tributary to the Authority's Charles

River Valley Sewer, totaling approximately 72 acres. The work includes micro-tunneling along Beacon Street to install new sewers at significant depths; installation of sewers on Monmouth, St. Mary's, and Carlton Streets; and the construction of several structures to connect the new sewers with the existing laterals. The Town of Brookline previously completed the first contract, which provides for the installation of new storm drains north and south of Beacon Street.

The Town of Brookline currently anticipates that it will be able to complete construction of the entire project ahead of the July 2013 milestone in Schedule Seven. When implemented, this project, together with the other projects added to the CSO control plan for the Charles River by agreement with EPA and DEP in 2006, is predicted to reduce discharges from the Cottage Farm CSO treatment facility.

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

The Authority continues to conclude from the results of extensive system record reviews and hydraulic model evaluations it conducted in 2008 and 2009 that there is no feasible means to optimize the gates, the gate controls or the structures at existing interconnections between the Authority's Charles River Valley Sewer ("CRVS") and South Charles Relief Sewer ("SCRS") because any such modification would increase the risk of system flooding, backups and/or sanitary sewer overflows and would not provide meaningful CSO benefit. Any CSO control implemented from these evaluations would have added to and exceeded, but would not have

been necessary to attain, the approved long-term level of CSO control for the Charles River.

As reported last quarter, the Authority provided more information to the EPA and DEP on June 15, 2010, about the technical evaluations it had conducted on the feasibility of improving upon CSO control by implementing gate controls at existing interconnections between the CRVS and SCRS. On September 9, 2010, the Authority received an e-mail correspondence from EPA in response, in which EPA stated it continued to believe that there is the potential to make further reductions in treated CSO discharges at the Authority's Cottage Farm CSO treatment facility in a typical rainfall year by implementing either "active controls" or proportional flow devices, such as a "bendable weir." Such devices, EPA stated, could provide a higher level of flow control (i.e. reduction of treated discharges at Cottage Farm) in a typical rainfall year, and would "revert to a lower level of control in storms larger than the 2-year storm" to avoid system flooding.

On December 14, 2010, the Authority sent further correspondence to EPA and DEP to attempt to clarify the basis for concluding that no feasible optimization measure can be implemented and recommending that the project be deleted from Schedule Seven. (The interceptor gates project is not included in the Authority's Long-Term CSO Control plan approved by EPA and DEP or included in the plan's long-term level of control.) In its December 14 letter, the Authority addresses existing

high-flow level conditions in the interceptors in large storms and the potential for any new structural modification, including static weirs, adjustable weirs or bending weirs to impose further hydraulic restriction at the interconnections, thereby limiting the transfer of flow from the CRVS to the SCRS during larger and extreme storms and contributing to higher hydraulic grade lines in the CRVS above already threatening levels.

The letter also summarizes the hydraulic model results the Authority previously submitted to EPA and DEP on the evaluation of control strategies for operating the gates existing in two of the three interconnections. These evaluations were an attempt to identify the potential for higher CSO control without adding new structural elements to the interconnections in order to avoid further restricting flow transfer in large storms. From the gate operating strategy evaluations, the Authority concluded that to avoid water level impacts, the gates would have to open even in the storms that are predicted to begin to cause CSO discharges at Cottage Farm under Long-Term Control Plan conditions, removing any CSO benefit.

The December 14 letter also repeats information previously submitted to EPA and DEP that the confirmed existing flow level and system conditions violate the CSO system criteria established by the Authority in 1993 and since used to optimize the system and reduce CSO discharges at dozens of outfall locations through the region (e.g. the

system optimization plans implemented in 1995-6, the Prison Point facility gate controls implemented in 2007, and the Cottage Farm facility inflow controls completed in 2009.

Meanwhile the CSO control measures that were added to the Authority's long-term CSO control plan and Second Stipulation of the United States and the Authority on Responsibility and Legal Liability for CSO control in 2006 to further reduce discharges to the Charles River are complete with the exception of the Brookline Sewer Separation project, which is in construction. The current cost to complete these projects in the Authority's proposed capital budget for fiscal year 2012 is \$41 million, more than twice the original estimated cost of \$19 million.

e. 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,

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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, 2010.

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

Dated: December 15, 2010

# **EXHIBIT A**

SCHEDULE SEVEN

EXHIBIT "A"

MWRA MONTHLY COMPLIANCE REPORT

November, 2010

MONTH/YEAR

CSO CONTROL

LONG-TERM  
SLUDGE MANAGEMENT

NEW BOSTON HARBOR  
SECONDARY  
TREATMENT PLANT

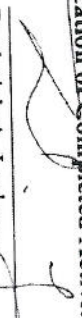
November 2010

MWRA to commence construction of control gate/floatables control at outfall MW/R003 and MWRA Rindge Avenue siphon relief.

(Not Completed - See December 15, 2010 Compliance and Progress Report.)

Certification of Completed Activities

By:

  
Frederick A. Lasky  
Executive Director, MWRA

Date: December 15, 2010



## **EXHIBIT B**

Massachusetts Water Resources Authority



Combined Sewer Overflow  
Control Plan

Quarterly Progress Report  
December 15, 2010

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**Table 1  
Status of CSO Project Implementation  
December 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				X
Hydraulic Relief Projects	CAM005 Relief			X
	BOS017 Relief			X
East Boston Branch Sewer Relief				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	X	
Bulfinch Triangle Sewer Separation				X
Brookline Sewer Separation				X
Somerville Baffle Manhole Separation				X
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 2012		
Region-wide Floatables Control and Outfall Closings				X

<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  
Quarterly Progress Report - December 2010

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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 September 16, 2010, to December 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. MWRA and its CSO communities have completed 27 of the 35 projects, including one project completed in the past quarter. In October 2010, the City of Cambridge attained substantial completion of the Interceptor Relief and Floatables Controls at CAM002 and CAM401B and Floatables Control at CAM001 project, one of five projects in MWRA's long-term CSO control plan for Alewife Brook.

Five of the eight projects not complete are in the construction phase. Construction is well underway and progressing as scheduled on three of these projects: the North Dorchester Bay Storage Tunnel and Related Facilities (by MWRA), the Reserved Channel Sewer Separation project (by Boston Water and Sewer Commission (BWSC)), and the CAM400 Manhole Separation project (by City of Cambridge) that is part of the Alewife Brook CSO control plan. As previously reported, the Town of Brookline completed the first of two construction contracts for the Brookline Sewer Separation project early this year, and Brookline expects to award the second, much larger, construction contract soon. The fifth 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. MWRA continues to recommend removing the Charles River

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Combined Sewer Overflow Control Plan  
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Interceptor Gate Controls and Additional Interceptor Connections project from Schedule Seven, as further discussed on pp. 3-4 below. Regarding the two Alewife projects, the City of Cambridge continues its efforts to overcome difficulties with negotiation of easements on certain private properties and is hopeful it will be able to commence construction of the CAM004 Stormwater Outfall and Wetland Basin project (Contract 12) soon. MWRA plans to commence design of Outfall MWR003 Gate Controls, Rindge Ave. Siphon Relief and Interceptor Connection Relief and Floatables Control in 2012, though the schedule for this project is dependent on the schedule for construction of Contract 12.

## 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 \$27.0 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. (See pg. 4.)
- BWSC completed the first of nine planned construction contracts for the \$67.2 million Reserved Channel Sewer Separation project. BWSC issued Notices to Proceed with two additional construction contracts and intends to award two more construction contracts soon, once it receives authorizations to award from Massachusetts Department of Environmental Protection (DEP) in accordance with Massachusetts Clean Water State Revolving Fund (CWSRF) regulations. BWSC also continues to make progress with final design of the remaining four contracts. (See pg. 5.)
- As previously reported, the Town of Brookline completed the installation of new storm drains in the first of two construction contracts for the \$22.7 million Brookline Sewer Separation project (an additional \$3 million MWRA contract is being developed to rehabilitate an outfall that will accept the new stormwater flows). On September 23, 2010, Brookline received bids on its second, much larger, contract and expects to award this contract soon, once it receives DEP CWSRF authorization. (See pg. 6.)
- Cambridge continues to make progress with the \$3.9 million single construction contract that includes two of the five projects in the \$117 million CSO control plan for Alewife Brook: the CAM400 Manhole Separation project and the Interconnection Relief and Floatables Control project. The contractor completed the interceptor connection

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relief and floatables control portion of the work in October, in compliance with the contract and in accordance with the schedule MWRA had proposed to the U.S. Environmental Protection Agency (EPA) and DEP in 2009. Regarding the CAM004 Stormwater Outfall and Wetland Basin project (Contract 12) negotiations between the City of Cambridge and two land owners for remaining easements on private property have been delayed and extended, but Cambridge is hopeful it can secure the remaining easements and issue Notice to Proceed with construction of Contract 12 by March 2011. (See pg. 7)

- BWSC continues to make progress 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. The contract completion date is May 13, 2011.
- 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. On November 11, 2010, BWSC awarded a design contract to identify and recommend additional sources of inflow that should be removed. BWSC's consultant has initiated field investigations and is developing a flow metering program. The contract schedule calls for the consultant to submit the results of the investigations and its recommendations for inflow removal to BWSC in early 2012.
- On December 14, 2010, MWRA submitted to EPA and DEP additional clarification on the results of its engineering study of the Charles River Valley/South Charles Relief Sewer Gate Controls and Additional Interceptor Connections, in response to EPA comments dated September 9, 2010. The information in the December 14 letter is intended to clarify the results of the hydraulic model simulations MWRA had conducted to evaluate the feasibility of implementing operational control strategies for the existing gates in two of the three interconnections that allow flow to transfer from the Charles River Valley Sewer to the South Charles River Relief Sewer. In the letter, MWRA also repeats its concern that any added control structure or operational strategy carries great risk for upstream system flooding and overflows.

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 levels of control in MWRA's approved long-term control plan. Meanwhile, the \$92 million set of CSO projects necessary to attain the long-term levels of CSO control for the Charles River is complete save for the Brookline Sewer Separation project, which is in construction.

### 3. Project Implementation

#### 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 the \$3.2 million Pleasure Bay Storm Drain Improvements, which MWRA completed in March 2006, the \$36.2 million Morrissey Boulevard Storm Drain, which BWSC completed in July 2009, and the \$147 million North Dorchester Bay CSO Storage Tunnel, which MWRA substantially completed in November 2009 (the tunnel contractor recently completed all punch list items).

As previously reported, the contractor for the \$27.0 million tunnel dewatering pumping station at Massachusetts Port Authority's Conley Terminal and associated force main has completed the installation of the 3,200-foot long, 24-inch diameter force main including the connection to the pumping station, as well as the 640-foot long, 30-inch diameter pipe to upsize a BWSC gravity sewer on N Street to accept the pumping station/force main flows. In the past quarter, the contractor completed temporary or permanent pavement and sidewalk restoration work over these new pipes on East Broadway and N Street, as well as at the intersection of N Street and Day Boulevard. The contractor also completed installation of a 10-inch water main from the new pumping station to a water meter pit located on Farragut Street.

At the pumping station site, the contractor has completed the placement of masonry blocks for the pumping station walls and nearly completed installation of the veneer brick and cast-stone facing. The contractor has erected and welded the steel framing for the lower roof section of the station and is forming the roof slab and placing reinforcing steel for the remaining portion of the station. A concrete slab over the "wet area" of the station is nearing completion. The contractor is also continuing with the installation of yard drainage and roadway and parking layout surrounding the pumping station, and has commenced construction of a new Massport access



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Combined Sewer Overflow Control Plan  
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roadway, drainage and lighting around the permanent MWRA easement area.

Plumbing and electrical work is ongoing. Factory tests on the three 7.5-million gallon per day (mgd) wet-weather flow pumps and the 2-mgd dry weather pump (to drain the tunnel of any groundwater infiltration that enters the upstream storm drain and CSO outfall systems) are complete, and the contractor received delivery of the pumps, along with a back-up dry-weather pump, on December 9, 2010.

Under separate contract, work is also progressing on schedule on the \$5.2 million below-ground tunnel ventilation building at the upstream end of the tunnel near the State Police Barracks off Day Boulevard. The contractor has completed application of the waterproof membrane to the roof of the below ground building. The contractor has completed all other structural concrete components of the building and expects to apply remaining sections of the waterproof membrane by the end of this year. The contractor has removed structural steel bracing from the support of excavation system and continues the backfilling operation with previously excavated clay, which will provide another barrier to groundwater. Plumbing and electrical work is ongoing, and the contractor expects to receive core facility operations equipment such as the motor control center and odor control vessels in the next quarter.

MWRA remains on schedule to complete all work of these two remaining contracts and bring the North Dorchester Bay CSO storage conduit and related facilities into service by May 2011, in compliance with Schedule Seven.

#### **Reserved Channel Sewer Separation**

The \$67.2 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

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rehabilitation contract, a downspout disconnection contract, and two final paving contracts.

BWSC issued the Notice to Proceed with the first construction contract (titled Contract 2) on May 26, 2009, in compliance with Schedule Seven. This \$6,938,141 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. In the past quarter, the contractor completed construction activities in the area bounded by East Broadway, East Third, O and P Streets and attained substantial completion of the contract at the end of October.

BWSC continues to make scheduled progress with final design and construction of the other contracts. BWSC recently awarded two of the contracts and plans to award the remaining contracts sequentially through April 2013. BWSC continues on schedule to complete all work for this project by December 2015, in compliance with Schedule Seven.

On November 30, 2010, BWSC issued Notice to Proceed with the \$3,986,000 construction contract for rehabilitation of the four CSO outfalls that discharge to the Reserved Channel (Contract 1). The contract completion date is November 30, 2011. On November 1, 2010, BWSC issued Notice to Proceed with a \$1,237,217 construction contract for roadway resurfacing (Contract 7). The contract completion date is April 19, 2012.

BWSC received bids on August 12, 2010, on a fourth construction contract (Contract 3A) which involves the installation of storm drains and removal of stormwater flows from the combined sewer system tributary to Outfall BOS076, one of four CSO outfalls that discharge to the Reserved Channel. In accordance with CWSRF regulations, BWSC submitted to DEP the bid documentation and a letter of intent to award this contract to the lowest responsive bidder in the amount of \$9,852,142. BWSC recently received authorization to award from DEP and expects to issue Notice to Proceed with this contract soon.

On September 29, 2011, BWSC advertised a fifth construction contract (Contract 3B), which involves the installation of storm drains and removal of stormwater flows from the combined sewer system tributary to Outfalls BOS078 and BOS079. BWSC received construction bids on October 29, 2010, and intends to award the contract to the lowest responsive bidder in the amount of \$10,888,001. BWSC is currently preparing documentation for submission to DEP requesting authorization to award under CWSRF.

### **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. As previously reported, Town of Brookline issued the Notice to Proceed for the \$1.4 million contract in November 2008, in compliance with Schedule Seven and completed the work early this year.

On September 23, 2010, Brookline received bids on the second, much larger, construction contract, which involves micro-tunneling along Beacon Street to install new sewers at significant depths, as well as construction of several special structures that will connect the new sewers with the existing laterals and convert the main trunk combined sewers to storm drains. Brookline intends to award the contract to the lowest responsive bidder, at the bid amount of \$16,356,562. Last month, Brookline submitted documentation to DEP in accordance with CWSRF regulations and is awaiting DEP authorization to award.

Meanwhile, after completing internal inspections of CSO Outfall MWR010, MWRA has issued a task order for final 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.

The Town of Brookline and MWRA expect to complete all work for this project ahead of the July 2013 milestone in Schedule Seven.

### **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 continues to make scheduled progress with the single construction contract that combines two of the five projects in

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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. The contractor attained substantial completion of the latter in October 2010 and expects to complete the CAM400 Manhole Separation work by March 31, 2011, as scheduled.

In the meantime, Cambridge is continuing efforts to obtain the remaining necessary easements and rights of entry from private and public landowners for the CAM004 Stormwater Outfall and Wetland Basin project (Cambridge Contract 12). The Massachusetts Department of Conservation and Recreation is in the process of granting easements and rights of entry to Cambridge, consistent with the Article 97 legislation enacted in August 2010.

Cambridge is continuing negotiations with two private property owners to secure the remaining necessary easements for Contract 12, including negotiations with a new property owner who acquired the property after a recent foreclosure. Negotiations with the owner of the other property are almost complete. The delay in obtaining the remaining easements is further delaying the start of construction, but Cambridge remains hopeful that it will complete negotiations and secure all remaining easements by February 2011 and award the Contract 12 in March 2011.

The delay with Contract 12 causes a day-for-day delay with the construction schedule for the one Alewife Brook CSO project that MWRA will implement: Control Gate/Floatables Control at MWR003, Rindge Avenue Siphon Relief, and Interceptor Connection Relief and Floatables Control at SOM01A. The December 2015 completion date for the last of the five Alewife Brook CSO projects, CAM004 Sewer Separation, is so far not affected by the Contract 12 delay.