

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 JUNE 15, 2006

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from March 16, 2006 to June 15, 2006 and supplementary compliance information in accordance with the Court's order of December 23, 1985 and subsequent orders of the Court.

**I. Schedule Six**

A status report for the scheduled activities for the months of March, April and May 2006 on the Court's Schedule Six, certified by Frederick A. Laskey, Executive Director of the Authority, is attached hereto as Exhibit "A."

**A. Activities Completed.**

**1. CSO Annual Progress Report.**

On March 15, 2006, the Authority submitted its Annual CSO Progress Report in compliance with Schedule Six.

**2. Optimization Study of Prison Point CSO Facility.**

On March 27, 2006, the Authority commenced a study to optimize the operating procedures of the Prison Point combined sewer overflow ("CSO") facility and related structures. The goal of the study is to identify and implement operating procedures that will minimize the frequency and volume of treated discharges at the Prison Point facility. The investigations are proceeding in three key directions: critical review of current operations, consideration of already planned improvements and their effects on Prison Point operations and discharges, and identification and evaluation of additional operational improvements that may further reduce treated discharges from the facility to the Inner Harbor.

Generally, activation of the facility is currently being optimized with two different strategies: "normal rainfall event" operation (i.e. small to medium

storms) and “major storm event” operation. Normal event operation is implemented when the Authority expects, from weather forecasting, a singular frontal weather pattern where rainfall should not exceed one-half inch over five or more hours. In this case, the Authority’s facility operators allow the level of the influent flow to reach 14 feet before the influent gates to the wet weather side of the facility are opened. For this situation, the Authority has confirmed that no adverse effects occur upstream, such as at upstream untreated CSO outfalls.

However, if weather forecasts show a large low pressure area with tropical bands of rain, and the rain estimates are two inches or more, the operators open the influent gates to the wet side of the facility when the influent flow level reaches 10 feet in front of the gates. Opening the gates at the lower elevation prevents the Prison Point facility from unnecessarily contributing to upstream flooding and overflows. Storms of two inches or greater are typically larger than the storms in the Authority’s “typical year,” which formed much of the basis for determining CSO control performance.

The Authority will investigate fine tuning the operation of the influent gates to maximize in-system storage benefit and minimize discharges at Prison Point. Potential improvements may involve better forecasting and expanded or modified operational strategies based on forecasting, improved use of remote depth sensors to monitor system conditions during filling and to control gate functions, and use of these controls to optimize the closing of the gates near the end of a storm, in addition to the current early storm storage.

Work previously planned by the Authority to optimize operations at the Prison Point facility involves implementation of supervisory control and data acquisition (SCADA) measures. When applied to Prison Point, these systems will allow remote manual operation or semi-automatic operation of the facility or other control structure with real-time data on system conditions at the facility/structure and at remote locations, such as upstream critical overflow points. Currently, the Authority operates depth sensors in two major conduits carrying overflows to the Prison Point facility: the Cambridge Marginal Conduit at the CAM017 regulator and in the Boston Marginal Conduit at its upstream end, not far from outfalls MWR018, 019 and 020. Depth sensor readings currently are transmitted to the Prison Point facility and are available to the operators for making operational decisions.

The sensors are currently not integrated with the existing SCADA system. Future SCADA integration will better alert operational staff when elevations approach the crest of the weir, which would result in an untreated overflow. In addition to integrating the two depth sensors, the program includes installing a third level sensor, in the Charlestown Branch Sewer at the BOS019 regulator, and new influent flow monitors in the three of the six inlet storm channels at the Prison Point facility, just downstream of the wet weather bar screens. The BOS019 depth sensor will assist the Authority in optimizing operation of the dry weather pumps at Prison Point, which discharge to the Charlestown Branch Sewer and can reduce the amount of flow directed to the wet side (treatment side) of the Prison Point facility. Careful operation of the

dry weather pumps is necessary to avoid contributing to surcharge in the Charlestown Branch Sewer and aggravating overflows at outfall BOS019. The new influent flow monitors at Prison Point will provide a major advantage in determining the flow rate for throttling or closing the influent gates and allow a more precise application of sodium hypochlorite (the disinfection agent) for discharge permit compliance and health and safety protection for the operators. The Authority plans to complete construction of these SCADA improvements over the next 36 months.

The Authority will continue to report on progress in developing an optimization program as it continues to study the operations at Prison Point and related structures over the next nine months.

### 3. Pleasure Bay Storm Drain Improvements.

As of March 28, 2006, the Authority completed construction and commenced operation of the Pleasure Bay storm drain improvements. The \$3.2 million contract (North Dorchester Bay construction contract CP-1) included installation of a new storm drain system surrounding the perimeter of Pleasure Bay and the removal of the old storm drain outfall pipes which discharged to the Pleasure Bay beach area. The new storm drain system redirects stormwater discharges to the Reserved Channel (outfall BOS080) and to a North Dorchester Bay outfall (BOS081) which will eventually be connected to the proposed North Dorchester Bay CSO storage tunnel. The Authority designed and constructed the new drainage system for the Department of

Conservation and Recreation. With these improvements, all stormwater discharges to Pleasure Bay beach have been eliminated. The improvements also address chronic flooding along parts of Day Boulevard in the Pleasure Bay area. These benefits are the first to be realized by ongoing implementation of the Authority's long-term CSO control plan for the South Boston beaches.

**B. Progress Report.**

**1. Combined Sewer Overflow Program.**

**(a) Cambridge Sewer Separation.**

The City of Cambridge continues to be unable to move forward with construction of the new stormwater outfall and constructed stormwater wetland of Contract 12 due to further delays in obtaining relief from the citizens' appeal of the Superseding Order of Conditions that was issued by Massachusetts Department of Environmental Protection ("DEP") on March 31, 2005 pursuant to the Wetlands Protection Act.<sup>1</sup> The stormwater outfall and constructed stormwater wetland are critical early components of the Authority and Cambridge's long-term CSO control plan for the Alewife Brook and are necessary to support planned sewer separation in the CAM004 area and the closing of the CAM004 regulator. As noted in the Authority's last Compliance and Progress Report, the Commonwealth's Division of Administrative Law

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<sup>1</sup> See Compliance and Progress Reports dated March 15, 2006, pp. 5-6; December 15, 2005, pp. 6-7; September 15, 2005, pp. 8-9; June 15, 2005, pp. 10-11; December 15, 2004, pp. 10-12; and September 15, 2004, pp. 6-7 for previous reports on the wetland permitting issue.

Appeals had scheduled hearing dates for this appeal for May 31, June 1, 7 and 8, 2006. At that time, the Authority indicated that it was basing the current construction milestones for Contract 12 and the project milestones for related sewer separation projects in Cambridge on receiving the necessary wetlands approvals in June 2006 and that there would be a day-for-day delay for each project milestone if Cambridge did not receive the necessary wetlands approvals in June 2006.

On May 31, 2006, the Commonwealth's Division of Administrative Law Appeals issued a revised scheduling order postponing the hearing dates to the week of September 18, 2006. A copy of the scheduling order is attached as Exhibit "B." As a result, the Authority anticipates that there will be a three-month delay for each of the construction milestones relating to sewer separation in Cambridge that were recently added to Schedule Six by the Court's Order dated April 27, 2006. The projects include CAM400 manhole separation; interceptor connection relief and floatables control at CAM002, CAM401B, SOM01A, and CAM001; CAM004 stormwater outfall and detention basin; CAM004 sewer separation; and the control gate and floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief. The Authority will report next quarter on the status of this appeal.

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

Over the past quarter, the Authority was able to complete the final construction plans and specifications for the North Dorchester Bay CSO

storage tunnel and advertise the documents for construction bids. The bid phase is on schedule for the Authority to issue the Notice to Proceed with the tunnel construction contract (North Dorchester Bay construction contract CP-2) by August 2006, in compliance with Schedule Six.

In March, the Authority held numerous meetings with its design team and its construction management team to complete the review of the 100-percent plans and specifications and to finalize the CP-2 contract documents. The Authority also made significant progress in finalizing the various construction permits and permanent easements for CP-2. The Authority advertised the construction documents on April 12, 2006 and began distributing the documents to prospective bidders and others on April 19, 2006. On May 11, the Authority held a pre-bid conference at the Curley Recreation Center in South Boston, conducted a bus tour of the project site, and made all geomaterials collected by the Authority along the tunnel alignment available for viewing by prospective bidders at its Deer Island Treatment Plant facility.

The Authority had set the original bid opening date for June 8, 2006, but in response to bidder requests, sent out Addendum No. 1 on May 22 extending the bid opening to June 29, 2006. The Authority plans to seek approval from its Board of Directors to award the construction contract at the July 19 meeting assuming no further extension of the bid date is necessary to respond to technical or bidding related issues.



In addition, the Authority made substantial progress in procuring final design services for the tunnel-related CSO facilities. These facilities, which will eventually be constructed with the North Dorchester Bay construction contract CP-3, include the 15 million gallon per day dewatering pump station at the downstream end of the tunnel on Conley Terminal, the 24-inch force main from the pump station to a connection with a Boston Water and Sewer Commission ("BWSC") sewer in "N" Street (for conveyance of the tunnel flows to Deer Island for treatment), and the remote odor control facility at the upstream end of the tunnel adjacent to the State Police Barracks. The Authority drafted the scope of services and plans to issue the request for first stage proposals (qualifications) with the scope by the end of June. The Authority plans to issue the Notice to Proceed for final design and construction administration services in October 2006.

(c) Reserved Channel Sewer Separation.

On June 12, 2006, the Authority and BWSC executed an amendment to their CSO Memorandum of Understanding and Financial Assistance Agreement adding the Reserved Channel Sewer Separation project at an estimated capital cost and eligible award amount of \$54,193,000. Pursuant to terms and conditions of the amended agreement, BWSC will manage design and construction of the project and the Authority will fund eligible design and construction costs. BWSC has received qualifications and proposals for related design services and expects to select a firm and award the design contract by

July, in accordance with Schedule Six. The Reserved Channel sewer separation project is intended to minimize CSO discharges to the Reserved Channel by separating combined sewer systems serving adjacent areas of South Boston. Implementation of the recommended sewer separation plan will reduce the number of overflows to the Reserved Channel from as many as 37 to three in a typical year.

(d) Interceptor Relief for BOS003-014.

The Authority made substantial progress in procuring engineering consultant services to resume and complete design of the East Boston Branch Sewer Relief project. The Authority issued a request for first stage proposals (qualifications) with the scope for project design and construction administration services on February 15, 2006 and received qualifications from prospective design firms on March 16, 2006. The Authority received second stage proposals (cost) from short-listed firms on April 28, 2006 and selected an engineering firm.

On June 7, 2006, the Authority's Board of Directors authorized award of the \$2.9 million design and construction administration services contract. The Authority plans to issue the Notice to Proceed for design services by June 30, in compliance with the milestone for resumption of design in Schedule Six.

(e) **Brookline Connection and Cottage Farm Overflow Chamber Interconnection and Gate.**

The Authority also made substantial progress in procuring design services for the Brookline Connection, Cottage Farm Overflow Chamber Interconnection and Cottage Farm Gate Control project, the first project associated with the new set of projects in the Authority's revised plan for Charles River CSO control. On April 15, 2006, the Authority issued the request for first stage proposals (qualifications) with the scope for design and construction administration services. Qualifications are due by June 23, 2006, after which the Authority will issue a request for second stage proposals (cost) to firms short-listed by the Selection Committee. The Authority plans to issue the Notice to Proceed for the design and construction administration services by September 2006, in compliance with Schedule Six.

(f) **Stony Brook Sewer Separation.**

The Stony Brook sewer separation project is now approximately 96-percent complete. BWSC has installed 70,350 linear feet of new storm drain out of a total of 73,300 linear feet. The Authority anticipates that BWSC will complete the separation work within the next several weeks, in accordance with Schedule Six. Once completed, the \$45 million Stony Brook sewer separation project will minimize CSO discharges into BWSC's Stony Brook Conduit, which drains to the Charles River Basin.

(g) Union Park Detention and Treatment Facility.

The contractor is 93-percent complete with construction of the Union Park detention and treatment facility. Among the work recently completed are major structural modifications including unanticipated structural repairs due to excessive deterioration of existing beams and floor slabs that were required to carry structural loads and to commence work in the new chemical feed and hydraulics rooms. The contractor is currently installing new structural steel members, a new membrane roof, and rough-ins for HVAC, electrical, plumbing and process piping in the new chemical feed and hydraulics rooms. The contractor also installed all major equipment in the new CSO building and in the detention storage tanks and continues to work on HVAC, electrical, odor control duct work, plumbing, fire protection and process piping. Construction of exterior concrete stairways and a new entrance foyer for the existing building is ongoing. The contractor also installed a new turbine engine and pump in the existing BWSC pump station and commenced work on the replacement of two tide gates in existing BWSC manholes in Albany Street. This work is intermittent and dependent on the tide, weather and traffic permit restrictions and is expected to be completed in July 2006. The Authority anticipates that the contractor will complete all instrumentation for both facilities and commence four months of testing and system checkout in September.

At its May 2006 meeting, the Authority's Board of Directors approved a change order extending the substantial completion date to December 26, 2006. This change order was primarily related to delays in bringing a new electrical

service to the site.<sup>2</sup> The contractor's schedule indicates four months of testing prior to substantial completion.

(h) Quarterly CSO Progress Report.

In accordance with Schedule Six, the Authority submits as Exhibit "C" 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 Six.

2. Walpole Landfill Site.

As previously reported, the Town of Walpole is seeking to use part of the Authority's landfill site in Walpole as playing fields for youth sports activities.<sup>3</sup> The Authority understands that Senator Tilty recently filed legislation permitting the Authority to enter into an agreement with the Town for the use of a portion of the landfill site for recreational purposes. State Senator Tilty's office drafted the proposed legislation in conjunction with a draft provided by the Authority. The Authority believes that this legislation is consistent with the requirements of the Court's Order dated September 28, 2005. The Authority has circulated the proposed legislation to the parties. A copy is attached as Exhibit "D."

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<sup>2</sup> See Compliance and Progress Reports dated March 15, 2006, pp. 6-7.

<sup>3</sup> See Compliance and Progress Reports dated December 15, 2006, pp. 7-8.

**3. Revisions to Schedule Six.**

The Authority submits a proposed revision to the Court's long-term schedule, which is entitled Schedule Seven. Proposed Schedule Seven is attached as Exhibit "E." Schedule Seven incorporates changes from Orders issued on February 27, 2004, June 30, 2005, September 28, 2005, and April 27, 2006. As was the case with Schedules One through Six, proposed Schedule Seven focuses on milestones for the planning, design, construction and operation of wastewater treatment facilities and therefore is not an exhaustive statement of all Court-ordered requirements; for example, the requirement that the Authority identify back-up disposal sites for sludge does not appear in Schedule Seven.

The Authority sent a draft of proposed Schedule Seven to the parties on June 2, 2006 for their review and received comments only from the United States. In response to those comments, the Authority included in the version of proposed Schedule Seven filed herewith an additional sentence in footnote 31 and made clear that the annual March 15 CSO reporting requirement continues through 2016. Also, as requested by the United States, the Authority confirms its understanding that, if Schedule Seven is adopted by

the Court, references to “Schedule Six” in Court orders and the Second Stipulation shall thenceforth be deemed to refer to “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 June 15, 2006:

/s/ John M. Stevens  
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Dated: June 15, 2006

B3216080.1

**EXHIBIT "A"**



**SCHEDULE SIX**

**MWRA MONTHLY COMPLIANCE REPORT**  
 March, April, May 2006

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


**LONG-TERM  
 SLUDGE  
 MANAGEMENT**

**CSO CONTROL**

**MONTH/YEAR**

March 2006	MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>  (Completed - March 15, 2006)
April 2006	MWRA to commence 12-month optimization study to identify operating procedures at Prison Point and related structures that will minimize treatment discharges from the Prison Point facility without increasing untreated overflows elsewhere.  (Completed March 27, 2006)
May 2006	MWRA, in cooperation with BWSC, to complete construction of Pleasure Bay storm drain improvements.  (Completed March 28, 2006)

**Certification of Completed Activities**

By:   
 Frederick A. Laskey  
 Executive Director, MWRA

Date: June 15, 2006

**EXHIBIT "B"**

May 31 2006 4:14PM

No. 5580 P 2/4

COMMONWEALTH OF MASSACHUSETTS  
DIVISION OF ADMINISTRATIVE LAW APPEALS

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In the Matter of

Docket No. DEP-05-805

CITY OF CAMBRIDGE DEPARTMENT OF  
PUBLIC WORKSDEP File No. 123-175  
CambridgeORDER re SCHEDULE

At Boston this 31st day of May, 2006.

This Order confirms scheduling agreed upon during my telephone conference this afternoon with counsel for the petitioner, the City of Cambridge Department of Public Works (the City) and DEP. In view of this schedule and DALA's relocation to 98 North Washington Street in Boston, the hearing dates that were scheduled for June 2006 are cancelled.

1. Filings prior to my disposition of the pending summary decision motions

(a) DEP shall have until and including June 15, 2006 to file a reply regarding the City of Cambridge DPW's motion for summary decision on the project alternatives issue (Issue 1) and the petitioner's opposition to summary decision on that issue.

(b) The petitioner and the City shall each have until and including June 29, 2006 to file a response to DEP's reply.

(c) Any party wishing to file a further reply to one or both of the responses due on June 29, 2006 shall file a request for leave to do so with a copy of the further reply attached to it. No deadline for this filing was set during today's telephone conference, but I am setting one now: 5 p.m. on July 12, 2006.

2. Filings following the decision on the pending summary decision motions

(a) 14 calendar days after the decision,<sup>1</sup> the City shall file and serve its prefiled direct testimony.

(b) 7 calendar days after the City files and serves its prefiled direct testimony, DEP shall file and serve its prefiled direct testimony.

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<sup>1/</sup> The 14 days will be counted starting on the day after the date of the decision. If the 14<sup>th</sup> day falls on a Saturday, Sunday, holiday or other day on which state offices in Boston are closed, the last day for filing and serving will be the next business day. The same method of counting days and determining the last day for filing and serving applies to items (b), (c) and (d).

May 31, 2006 4:14PM

No 5580 P. 3/4

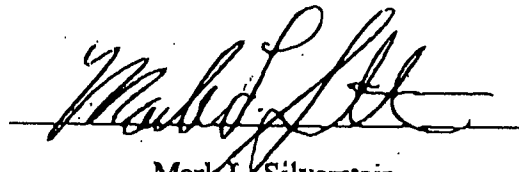
- 2 -

(c) 14 calendar days after DEP files and serves its prefiled direct testimony, the petitioner shall file and serve its prefiled rebuttal testimony.

(d) 14 days after the petitioner files and serves its prefiled rebuttal testimony will be the last day for any party wishing to do so to file and serve a motion to strike testimony and/or a motion for a directed decision.

In anticipation of hearing sessions during the week of September 18, 2006 as to issues that survive summary decision and remain for adjudication, the parties will consult to determine when during that week their respective witnesses will be available to appear. They will advise me of this information by letter once they know, and at any rate before mid-August, so that I can block out the necessary dates and times for the hearing.

To assure timely receipt of this Order, I am issuing it by fax only.



Mark L. Silverstein  
Administrative Magistrate

SERVICE LIST

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CAMBRIDGE DPW  
# DEP-05-805

**EXHIBIT "C"**

**Massachusetts Water Resources Authority**



**Combined Sewer Overflow  
Control Plan**

**Quarterly Progress Report**  
**June 15, 2006**

Massachusetts Water Resources Authority  
 Combined Sewer Overflow Control Plan  
 Quarterly Progress Report - June 2006

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Massachusetts Water Resources Authority  
Combined Sewer Overflow Control Plan  
Quarterly Progress Report - June 2006

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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 related schedule of milestones (Schedule Six), the report summarizes progress made during the period from March 16, 2006, to June 15, 2006, identifies project schedules relative to corresponding Court milestones and describes issues that have affected or may affect compliance with Schedule Six.

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 2005*, dated March 2006. The Annual Report is available for public review on MWRA's website, at [www.mwra.com](http://www.mwra.com).

MWRA and its CSO member communities continue to make substantial design and construction progress on several CSO projects. Table 1 shows the status of implementation for each project. Schedule Six includes three milestones in the period March through May 2006: 1) MWRA to submit its CSO annual report by March 15, 2) MWRA to commence 12-month optimization study of operations at the Prison Point CSO Facility and related structures by April 1, and 3) MWRA to complete construction of Pleasure Bay storm drain improvements by May. MWRA did comply with all three milestones.

As shown in Table 1, MWRA has completed 15 projects in its long-term CSO control plan, including the Pleasure Bay storm drain improvements. Eight of the remaining projects are in construction. These include five projects for which major construction efforts are currently underway - the Union Park Detention/Treatment Facility, the BOS019 CSO Storage Conduit, South Dorchester Bay Sewer Separation, Stony Brook Sewer Separation, and Fort Point Channel Sewer Separation - and three projects for which portions of construction were previously completed - the East Boston Branch Sewer Relief project, Cambridge/Alewife Brook Sewer Separation and Regionwide Floatables Controls.

The Court Order now references 35 projects in MWRA's long-term CSO control plan, up from the 25 that have been reported on since MWRA first recommended the long-term plan in 1997. The additional projects include the revised plans for North Dorchester Bay (now three projects instead of two, including Pleasure Bay storm drain improvements and Morrissey Boulevard Storm Drain) and Alewife Brook (now described as five projects instead of one); the set of four projects that increase the level of CSO control in the Charles River; and the Prison Point optimization study. A list of the CSO projects, historically, is presented in Table 2.

**Table 1. CSO Project Progress**

		Status as of June 15, 2006		
		IN DESIGN	IN CONSTRUCTION	COMPLETE
Contract	CSO Projects			
<b>MWRA Managed Projects</b>				
N. Dorchester Bay Storage Tunnel	N. Dorchester Bay CSO Storage Tunnel and Related Facilities	✓		
N. Dorchester Bay CSO Facilities				
Pleasure Bay Storm Drain Improvements				✓
Hydraulic Relief Projects	CAM005 Relief			✓
	BOS017 Relief			✓
East Boston Branch Sewer Relief		✓	✓	
BOS019 CSO Storage Conduit			✓	
Chelsea Relief Sewers	Chelsea Trunk Sewer Relief			✓
	Chelsea Branch Sewer Relief			✓
	CHE008 Outfall Repairs			✓
Union Park Detention/Treatment Facility			✓	
CSO Facility Upgrades and MWRA Floatables	Cottage Farm Upgrade			✓
	Prison Point Upgrade			✓
	Commercial Point Upgrade			✓
	Fox Point Upgrade			✓
	Somerville-Marginal Upgrade			✓
MWRA Floatables and Outfall Closings				✓
Brookline Connection and Cottage Farm Overflow Interconnection and Gate		Start 9/06		
Charles River Interceptor Gate Controls and Additional Interceptor Connections		Start 1/08		
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		Start 7/06		
Bulfinch Triangle Sewer Separation		Start 11/06		
Brookline Sewer Separation		Start 11/06		
Somerville Baffle Manhole Separation				✓
Cambridge/Alewife Brook Sewer Separation	CAM004 Outfall and Basin	✓		
	CAM004 Sewer Separation	✓	✓	
	CAM400 Manhole Separation	Start 10/06		
	Interceptor Connection Relief/Floatables	Start 10/06		
	MWR003 Gate and Rindge Ave. Siphon	Start 7/09		
Region-wide Floatables Control and Outfall Closings		✓	✓	

Massachusetts Water Resources Authority  
Combined Sewer Overflow Control Plan  
Quarterly Progress Report - June 2006

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The following are highlights of the progress MWRA made on CSO control projects in the second quarter of 2006. More information is provided in later sections of this report.

- On April 27, 2006, Federal District Court Judge Richard G. Stearns accepted a motion by MWRA and U.S. EPA approving a long-term CSO control plan, amending or adding schedule milestones for several of the projects, and substituting a Second CSO Stipulation for the First CSO Stipulation entered February 27, 1987.
- On March 27, 2006, in accordance with Schedule Six, MWRA began a study intended to optimize operation of the Prison Point CSO facility and related structures to minimize treated discharges from the facility to the Inner Harbor.
- On March 28, 2006, MWRA completed construction of Pleasure Bay storm drain improvements, ending stormwater discharges to Pleasure Bay beach.
- MWRA completed final design of the North Dorchester Bay CSO storage tunnel and released the construction contract documents to bidders on April 19, 2006.
- MWRA continued to make progress with construction of the Union Park Detention Treatment Facility and the BOS019 CSO Storage Conduit. Construction work on these projects is 93% complete and 60% complete, respectively. MWRA executed a change order to the Union Park construction contract extending the substantial completion date to December 26, 2006.
- BWSC continued to make construction progress on the South Dorchester Bay, Stony Brook and Fort Point Channel sewer separation projects, which BWSC continues to expect to complete on schedule. BWSC also continued to make design progress on the Morrissey Boulevard storm drain, associated with the North Dorchester Bay project.
- MWRA made substantial progress toward procurement of engineering design services for East Boston Branch Sewer; Cottage Farm Brookline Connection, Overflow Chamber Interconnection and Inflow Controls; North Dorchester Bay CSO Facilities (related to the storage tunnel). BWSC made substantial progress toward procurement of design services for the Reserved Channel sewer separation project.
- With the desire to move the implementation of the Alewife Brook CSO control plan forward, the City of Cambridge continues its efforts to gain relief from a citizens' appeal of a state wetlands permit for Contract 12, which includes the new storm drain outfall and wetland detention basin. However, on May 31, 2006, the Massachusetts Division

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of Administrative Law Appeals issued an order revising the schedule for hearing dates from June 2006 to September 2006. This 3-month delay in resolving the appeal will cause corresponding delays in design and construction of the various projects in MWRA's long-term control plan for Alewife Brook. In the meantime, Cambridge has moved forward with final design of floatables controls for its remaining CSO outfalls along the Charles River.

## **2. Project Implementation**

### **2.1 MWRA-Managed Projects**

#### **North Dorchester Bay Tunnel and Related Facilities**

MWRA completed the final construction plans and specifications for the North Dorchester Bay CSO storage tunnel and advertised the documents for construction bids in April. The bid phase is on schedule for MWRA to issue the Notice to Proceed with the tunnel construction contract (North Dorchester Bay construction contract CP-2) by August 2006, in compliance with Schedule Six.

MWRA had set the original bid opening date for June 8, 2006, but in response to bidder requests, sent out Addendum No. 1 on May 22 extending the bid opening to June 29, 2006. MWRA plans to seek approval from its Board of Directors to award the construction contract at the July 19 meeting assuming no further extension of the bid date is necessary to respond to technical or bidding related issues.

In addition, MWRA made substantial progress in procuring final design services for the tunnel-related CSO facilities. These facilities, which will eventually be constructed as part of the North Dorchester Bay construction contract CP-3, include the dewatering pump station at Conley Terminal, a 24-inch force main and the remote odor control facility near the State Police Barracks. MWRA has drafted the scope of services and plans to issue the request for first stage proposals (qualifications) with the scope by the end of June.

#### **Pleasure Bay Storm Drain Improvements**

As of March 28, 2006, MWRA completed construction and commenced operation of the Pleasure Bay storm drain improvements. The \$3.2 million contract (North Dorchester Bay construction contract CP-1) included installation of a new storm drain system surrounding the perimeter of Pleasure Bay and the removal of the old storm drain outfall pipes which discharged to the Pleasure Bay beach area. With these improvements, all stormwater discharges to Pleasure Bay beach have been eliminated. The improvements also address chronic flooding along parts of Day Boulevard in the Pleasure Bay area.

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

On June 7, 2006, MWRA's Board of Directors authorized award of the \$2.9 million design and construction administration services contract. MWRA plans to issue the Notice to Proceed for design services by June 30, in compliance with the milestone for resumption of design in Schedule Six.

**BOS019 CSO Storage Conduit**

The contractor for the BOS019 CSO Storage Conduit has achieved 60% completion of construction. The contractor has installed all of the prefabricated sections of the 10 ft. by 17 ft. double barrel box conduits and has also completed 50% of the cast-in place sections of the conduits. MWRA plans to reach substantial completion by March 2007, the date it reported to the Federal Court prior to award of construction in March 2005.

**Union Park Detention/Treatment Facility**

The contractor is 93% complete with construction of the Union Park detention/treatment facility. The contractor recently completed major structural modifications and is currently installing new structural steel members, a new membrane roof, and rough-ins for HVAC, electrical, plumbing and process piping in the new chemical feed and hydraulics rooms. The contractor also installed all major equipment in the new CSO building and in the detention storage tanks and continues to work on HVAC, electrical, odor control duct work, plumbing, fire protection and process piping. Construction of exterior concrete stairways and a new entrance foyer for the existing building is ongoing. The contractor also installed a new turbine engine and pump in the existing BWSC pump station and commenced work on the replacement of two tide gates in existing BWSC manholes in Albany Street.

At its May 2006 meeting, MWRA's Board of Directors approved a change order extending the substantial completion date to December 26, 2006. This change order was primarily related to delays in bringing a new electrical service to the site.

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

On April 15, 2006, MWRA issued the request for first stage proposals (qualifications) with the scope for design and construction administration services. Qualifications are due by June 23, 2006, after which MWRA will issue a request for second stage proposals (cost) to firms short-listed by the Selection Committee. MWRA plans to issue the Notice to Proceed for the design and construction administration services by September 2006, in compliance with Schedule Six.

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### **Optimization Study of Prison Point CSO Facility**

On March 27, 2006, MWRA commenced a study to optimize the operating procedures of the Prison Point combined sewer overflow ("CSO") facility and related structures, in accordance with Schedule Six. The goal of the study is to identify and implement operating procedures that will minimize the frequency and volume of treated discharges at the Prison Point facility. The investigations are proceeding in three key directions: critical review of current operations, consideration of already planned improvements and their effects on Prison Point operations and discharges, and identification and evaluation of additional operational improvements that may further reduce treated discharges from the facility to the Inner Harbor. The work involves coordinated efforts of staff in MWRA's Planning, Engineering and Field Operations departments.

## **2.2 Community-Managed Projects**

### **South Dorchester Bay Sewer Separation**

South Dorchester Bay sewer separation is intended to eliminate CSO flows to the Commercial Point and Fox Point CSO treatment facilities by the Schedule Six milestone of November 2008, allowing MWRA to decommission the facilities. BWSC commenced construction in April 1999. To date, six separation contracts have been completed, leaving three ongoing contracts that are at various stages of completion ranging from 70% to 98%. Overall project work has resulted in the installation of a total of 128,573 linear feet of new storm drain, bringing the project to approximately 95% completion overall.

The second major downspout disconnection contract commenced in late 2004, and this contract is now approximately 66% complete. BWSC plans one additional downspout disconnection contract. Overall, approximately 43% of downspouts have been removed. Final paving work is also conducted under separate contracts. The first two paving contracts are complete. The third and final paving contract commenced in October 2005 and will continue through November 2008.

### **Stony Brook Sewer Separation**

Stony Brook sewer separation is intended to minimize CSO discharges into BWSC's Stony Brook Conduit, which drains to the Charles River Basin. BWSC commenced construction in July 2000 and has completed construction of the first two separation contracts. The third and fourth contracts are now approximately 97% and 88% complete, respectively. BWSC has installed a total of 70,350 linear feet of new storm drains, and the project is approximately 96% complete. BWSC has completed the initial paving contract. The second and final paving contract commenced in October 2005 and will continue through May 2008. As reported earlier, the major downspout disconnection contract in the Stony Brook project area is



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complete. This project is scheduled to be completed by September 2006, in compliance with Schedule Six.

**Fort Point Channel Sewer Separation**

The goal of the Fort Point Channel sewer separation project is to eliminate CSO discharges in a typical year at outfalls BOS072 and BOS073. The design report calls for the installation of 5,150 feet of new storm drain. BWSC commenced construction of the work on March 1, 2005, in compliance with the milestone in Schedule Six. BWSC commenced construction under a second, and final, contract in September 2005. This contract is approximately 17% complete. Construction is scheduled to be substantially complete by March 2007 in compliance with Schedule Six.

**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. BWSC commenced design of this project in June 2005. Design is approximately 90% complete. A proposed storm drain outfall basin in Savin Hill Cove is intended to allow for sedimentation of solids in the stormwater discharges. BWSC is redesigning the basin to address concerns raised by UMass regarding the potential for resuspension of sediments. Environmental review and permitting is delayed until the basin design is finalized. However, BWSC continues to plan to commence construction by December 2006 in compliance with Schedule Six.

**Reserved Channel Sewer Separation**

Reserved Channel sewer separation is intended to minimize CSO discharges to the Reserved Channel by separating combined sewer systems in adjacent areas of South Boston. Implementation of the recommended sewer separation plan will reduce the number of overflows to Reserved Channel from as many as 37 to 3 in a typical year.

BWSC advertised the request for qualifications and proposals for design services and received proposals from interested design firms. BWSC expects to select a design firm and award the design contract by July, in compliance with Schedule Six. On June 12, 2006, MWRA and BWSC executed an amendment to the CSO Memorandum of Understanding and Financial Assistance Agreement incorporating the Reserved Channel sewer separation project into these agreements, which establish management and funding responsibilities.

**Bulfinch Triangle Sewer Separation**

The goal of the Bulfinch Triangle sewer separation is to minimize CSO discharges to the Charles River by separating combined sewer systems in

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the area of Boston roughly bounded by North Station, Haymarket Station, North Washington St., Cambridge St. and immediate environs. Implementation of the recommended sewer separation plan will reduce the number of overflows to the Charles River, reduce overflows to the Prison Point CSO facility and close outfall BOS049.

BWSC will manage design and construction, and MWRA will fund project costs. BWSC and MWRA are finalizing an amendment to their CSO Memorandum of Understanding and Financial Assistance Agreement ("MOU and FAA") to add this project, which MWRA will present to its Board of Directors for approval on June 28. Meanwhile, BWSC advertised for and received proposals for the design services phase of this project. BWSC expects to select a firm and award the design contract this summer, in advance of the Schedule Six milestone of November 2006.

**Brookline Sewer Separation**

This project will separate several areas of Brookline, totaling 72 acres, where there are remaining combined sewers tributary to MWRA's Charles River Valley Sewer. The project is intended to reduce discharges to the Charles River at the Cottage Farm facility.

The Town of Brookline will manage design and construction, and MWRA will fund project costs. Brookline and MWRA are finalizing a CSO MOU and FAA which MWRA will present to its Board of Directors for approval on June 28. Brookline intends to award the design contract by November 2006, in compliance with Schedule Six.

**Cambridge/Alewife Brook Sewer Separation**

The City of Cambridge continues to be unable to move forward with construction of the new stormwater outfall and wetland detention basin of Contract 12 due to further delays in obtaining relief from the citizens' appeal of the Superseding Order of Conditions that was issued by Massachusetts Department of Environmental Protection ("DEP") on March 31, 2005 pursuant to the Wetlands Protection Act.

On May 31, 2006, the Commonwealth's Division of Administrative Law Appeals issued a revised scheduling order postponing the hearing dates from June 2006 to September 2006. As a result, the Authority anticipates that there will be a three month delay for each of the construction milestones relating to sewer separation in Cambridge which were recently added to Schedule Six by the Court's Order dated April 27, 2006. The projects include CAM400 manhole separation; interceptor connection relief and floatables control at CAM002, CAM401B, SOM01A, and CAM001; CAM004 stormwater outfall and detention basin; CAM004 sewer separation; and the control gate and floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief.



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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 Contract 12, MWRA has revised its schedule for the MWR003 improvements and Rindge Avenue Siphon. MWRA now plans to commence design by July 2009.

**2.3 Region-wide Floatables Control and Outfall Closing Projects**

MWRA and BWSC have completed work to control floatables in CSO discharges from the outfalls they own and operate, with the exception of floatables control at MWRA outfall MWR003, discussed above under "Cambridge/Alewife Brook Sewer Separation."

**Cambridge Floatables Control**

Floatables control will be installed by Cambridge at four Cambridge outfalls, as well as one Somerville outfall, along Alewife Brook as part of the Cambridge/Alewife Brook sewer separation project. These controls were included in the various regulatory filings on the Alewife sewer separation project and Alewife Brook/Upper Mystic River Variance. As previously reported, Cambridge has completed floatables control at one of these locations, CAM401A, and plans to complete construction at the other Alewife locations by 2008, but design work is on hold pending resolution of the Contract 12 wetlands appeal.

Floatables control is also proposed at four Cambridge outfalls along the Charles River. Cambridge's final design work is ongoing, and Cambridge plans to complete construction by December 2007.

**Table 2. List of CSO Projects**

PROJECT		Before South Boston Motion	With South Boston Motion 6/30/05	With Charles, Alewife and East Boston Motion 4/27/06
North Dorchester Bay	Storage Tunnel and Related Facilities	✓	✓	✓
	CSO Facility (Site J)	✓		
Pleasure Bay Storm Drain Improvements			✓	✓
Hydraulic Relief Projects	CAM005 Relief	✓	✓	✓
	BOS017 Relief	✓	✓	✓
East Boston Branch Sewer Relief		✓	✓	✓
BOS019 CSO Storage Conduit		✓	✓	✓
Chelsea Relief Sewers	Chelsea Trunk Sewer Relief	✓	✓	✓
	Chelsea Branch Sewer Relief	✓	✓	✓
	CHE008 Outfall Repairs	✓	✓	✓
Union Park Detention/Treatment Facility		✓	✓	✓
CSO Facility Upgrades and MWRA Floatables	Cottage Farm Upgrade	✓	✓	✓
	Prison Point Upgrade	✓	✓	✓
	Commercial Point Upgrade	✓	✓	✓
	Fox Point Upgrade	✓	✓	✓
	Somerville-Marginal Upgrade	✓	✓	✓
MWRA Floatables and Outfall Closings		✓	✓	✓
Brookline Connection and Cottage Farm Overflow Interconn. and Gate				✓
Charles River Interceptor Gate Controls and Additional Connections				✓
Optimization Study of Prison Point CSO Facility				✓
South Dorchester Bay Sewer Separation		✓	✓	✓
Stony Brook Sewer Separation		✓	✓	✓
Neponset River Sewer Separation		✓	✓	✓
Constitution Beach Sewer Separation		✓	✓	✓
Fort Pt Channel Conduit > Sewer Separation and System Optimization		✓	✓	✓
Morrissey Boulevard Storm Drain			✓	✓
Reserved Channel Consolidation Conduit > Sewer Separation		✓	✓	✓
Bulfinch Triangle Sewer Separation				✓
Brookline Sewer Separation				✓
Somerville Baffle Manhole Separation		✓	✓	✓
Cambridge/Alewife Brook Sewer Separation	CAM004 Outfall and Detention Basin			✓
	CAM004 Sewer Separation	✓	✓	✓
	CAM400 Manhole Separation			✓
	Interceptor Connection Relief/Floatables			✓
	MWR003 Gate and Rindge Ave. Siphon			✓
Region-wide Floatables Control and Outfall Closings		✓	✓	✓
<b>TOTAL NUMBER OF PROJECTS</b>		<b>25</b>	<b>26</b>	<b>35</b>

**EXHIBIT "D"**

SECTION 91. Notwithstanding any general or special law to the contrary, the Massachusetts Water Resources Authority may enter into a license agreement with the town of Walpole, upon terms that are satisfactory to the Authority, permitting the town to use a portion of a 94-acre parcel owned by the Authority located off of Winter Street in the town as playing fields for youth sports and recreation activities.

The use of the parcel by the town for these purposes shall not be considered a change in the present use of the parcel and shall not cause title to the parcel to revert to the commonwealth. Any subsequent discontinuance of this use, if the authority's license to the town expires, is revoked, or otherwise terminates, shall not be considered a change in the use of the parcel, nor shall this discontinuance of use cause title to the parcel to revert to the commonwealth.

Any license agreement between the authority and the town shall provide that the use of the parcel by the town may be immediately revoked at any time and for any reason by the Authority including, in particular, if the parcel must be used for the purposes intended and reserved for it under applicable Orders of the United States District Court in the pending case of U.S.A. v. MDC, et al., C.A. No. 85-0489-MA. No structures, improvements, or alterations of any description shall be built or placed upon the parcel. All equipment and fixtures necessary or useful to the conduct of youth sports or recreational activities upon the parcel shall be portable and easily removable.

Upon any expiration, revocation or other termination of any license agreement, the authority may, if necessary, use the parcel for the purposes originally intended in chapter 41 of the acts of 1991 without further legislation.

This section shall be of no further force or effect if the authority ceases to hold title to the parcel.

**EXHIBIT "E"**

**SCHEDULE SEVEN**

(Incorporates Orders through April 27, 2006)

<u>Month/Year</u>	<u>Deer Island Primary Treatment Plant Upgrading</u>	<u>Short-Term Sludge and Scum Management; Possible Ocean Dumping</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
<b>Dec. 1985</b>		<p>(1) MWRA to initiate evaluation of interim scum removal options.                      (2) MWRA to continue to operate Deer Island composting pilot project so as to treat at least [3 dry tons per day]<sup>1</sup> of Deer Island facilities' sludge, and shall not terminate or reduce its operations without the approval of the court.</p>	<p>(1) MWRA to complete draft Phase I report identifying selected alternatives for detailed facilities plan analysis.                      (2) MWRA to file Environmental Notification Form (ENF) on long-term residuals management facilities plan.</p>	<p>(1) MWRA to select consultant for facilities plan for shore-side access facility.</p>
<b>Jan. 1986</b>	<p>(1) EPA/DEQE to have acted on MWRA request for approval to advertise for construction bids for Deer Island electrical upgrade contract.                      (2) MWRA to advertise for construction bids for Deer Island electrical upgrade contract.</p>		<p>(1) MWRA to complete final Phase I facilities plan and publish notice of availability of Phase I facilities plan report in Environmental Monitor.                      (2) MWRA to seek environmental scoping by the EOE, including identification of environmental monitoring requirements.</p>	<p>(1) MWRA to receive action by the EOE on its request for certification of FEIR.                      (2) MWRA to award contract and begin facilities planning for shore-side pier and staging facilities.</p>

<sup>1</sup> At the request of the MWRA, the Court changed this to a production requirement of 15 dry tons per week.

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<p><b>Jan. 1986 (continued)</b></p>	<p>(3) MWRA to complete designs and submit final plans and specifications and a final step 3 grant application to DEQE for Deer Island disinfection system rehabilitation.</p>	<p>(3) EOE and EPA to hold public meetings on Phase I facilities plan and commencement of scoping of EIS.<sup>2</sup>                  (4) MWRA to provide DEQE with information necessary to enable DEQE to specify what air quality monitoring (of background levels) will be needed to enable DEQE to make potential regulatory determinations regarding sites under study for possible sludge incineration.                  (5) MWRA/EPA/DEQE to review Phase I facilities plan report.                  (6) MWRA to instruct consultant on Phase II facilities plan workplan.</p>	<p>(1) EPA to issue Record of Decision regarding treatment plant.                  (2) MWRA to submit ENF on site access.                  (3) MWRA to make final siting decision.                  (4) MWRA to report to Court on Feb. 17, 1986 commencement and completion dates for construction of primary and secondary elements of new plant and under harbor sewage transmission tunnels and effluent outfalls relating to the new plant, and on segmentation issue and prison issues.</p>
<p><b>Feb. 1986</b></p>	<p>(1) MWRA to complete Nut Island outfall cleaning.                  (1) MWRA to complete evaluation of interim scum removal options to eliminate discharges of scum from Deer Island and Nut Island and submit implementation plan for chosen option.<sup>3</sup>                  (2) MWRA to file ENF regarding treatment plant modifications and sludge handling facilities needed to prepare for possible ocean dumping.</p>	<p>(1) EOE to scope air quality and other environmental monitoring programs for long-term facilities plan EIS/EIR.                  (2) MWRA to receive DEQE's specifications on what air quality monitoring will be needed.</p>	<p>(1) EPA to issue Record of Decision regarding treatment plant.                  (2) MWRA to submit ENF on site access.                  (3) MWRA to make final siting decision.                  (4) MWRA to report to Court on Feb. 17, 1986 commencement and completion dates for construction of primary and secondary elements of new plant and under harbor sewage transmission tunnels and effluent outfalls relating to the new plant, and on segmentation issue and prison issues.</p>

<sup>2</sup> EPA shall complete scoping of EIS one month following completion of scoping of EIR; EPA to complete DEIS three months following completion of DEIR; EPA to complete FEIS three months following completion of FEIR; EPA to issue Decision of Record three months following EOE Certificate of EIR.

<sup>3</sup> MWRA reported this item as completed in its Monthly Compliance Report for February, 1986. The Compliance Monitor argued in her Report No. 3 that the MWRA had not completed a final scum management plan. The Court ordered the MWRA to submit its implementation plan by April 30, 1986. (See schedule for April 1986.)

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<b>March 1986</b>	(1) MWRA to execute construction contract for Deer Island power and pump station improvements.	(1) MWRA to submit detailed implementation plan and schedule for construction of all facilities necessary to enable it to dewater all sludge from existing Deer Island and Nut Island facilities, including facilities enabling it to transport liquid sludge to the dewatering site no later than September, 1991, or the end of the currently defined Period of Use <sup>4</sup> for the Deepwater Municipal Dump Site Region 11 (the "106" Site), whichever is sooner. (2) MWRA to report to Court by March 14, 1986 on interim limits for existing treatment plants, long-term and further intermediate schedules for construction of sludge management facilities, and a schedule for implementation of a program to terminate discharge of scum.	(1) MWRA to begin facilities planning for on-site pier and staging facilities.
<b>April 1986</b>	(1) DEQE to issue decision regarding certification of grant application for Deer Island disinfection system rehabilitation.	(1) [MWRA to file a non-compliance report by April 30 if it has *not submitted its implementation plan for scum removal.] <sup>5</sup> (2) [MWRA to submit *its final Phase I long-term residuals management plan by April 30.] <sup>6</sup>	(1) MWRA to report to Court by [April 1, 1986] <sup>7</sup> on allocation of responsibility for accomplishing CSO projects. (2) MWRA to award *contract to initiate further facilities planning, including site preparation for the treatment facilities, the plant's outfall(s), and the under-harbor tunnel.

<sup>4</sup> Earliest end date currently anticipated is March, 1991, as defined in 49 Fed. Reg. at 19,012 (May 4, 1984).

<sup>5</sup> Schedule One Compliance Order Number 3 (April 8, 1986), p. 2.

<sup>6</sup> Schedule One Compliance Order Number 3 (April 8, 1986), p. 3.

<sup>7</sup> The Court allowed the parties until April 30, 1986 in Schedule One Compliance Order Number 3 (April 8, 1986). p. 6.



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<p>May 1986</p>	<p>(1) MWRA to complete design and submit final plans and specifications and a final step 3 grant application to DEQE for Deer Island remote headworks improvements. (2) [MWRA to report by May 30 on status of construction contract for Deer Island Power and Pump Station improvements.]<sup>8</sup></p>	<p>(1) MWRA to complete report on Deer Island composting pilot program. (2) [MWRA to report by *May 15 on operating procedures for Nut Island designed to minimize discharges of sewage into the harbor.]<sup>9</sup> (3) [MWRA to submit by May 15 *its first quarterly report on staffing and pretreatment.]<sup>10</sup> #(2) MWRA to develop, in consultation with DEQE, field testing program to define scum screening, chemical pilation, and scum transportation, handling, and storage issues.</p>	<p>(1) MWRA to report to Court by May 30, 1986 on implementation of additional CSO projects and a detailed schedule for installation of dewatering facilities.</p>
<p>June 1986</p>	<p>(1) MWRA to complete design and submit final plans and specifications and a final step 3 grant application to DEQE for Deer Island sedimentation system improvements.</p>	<p>(1) MWRA to complete *final report on composting marketing studies.</p>	<p>(1) MWRA to file ENF regarding any further environmental review needed under MEPA, including any further environmental review needed for site preparation, the treatment facilities, the plant's outfall(s), and the under-harbor tunnel. (2) [MWRA has proposed that the Court provide for a further report on prison relocation in June 1986.]<sup>11</sup></p>

<sup>8</sup> Schedule One Compliance Order Number 4, March 1986.

<sup>9</sup> MWRA Proposed Form of Second Interim Order, Attachment A (April 30, 1986), p.3.

<sup>10</sup> Report of the MWRA on Scheduling and Compliance and Memorandum in Support of Adoption of Proposed Second Interim Order (February 18, 1986), p.17.

<sup>11</sup> Report of the MWRA on Scheduling and Compliance and Memorandum in Support of Adoption of Proposed Second Interim Order (February 18, 1986), p.16.

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<p><b>July 1986</b></p>	<p>(1) MWRA to execute construction contract for Deer Island electrical upgrade.                  (2) EPA/DEQE to have acted on MWRA request for approval to advertise for bids for construction of Deer Island disinfection system rehabilitation.                  (3) MWRA to advertise for bids for construction of Deer Island disinfection system rehabilitation.</p>	<p>(1) MWRA to complete draft Environmental Impact Report (DEIR) regarding treatment plant modifications and sludge handling facilities needed to prepare for possible ocean dumping.                  (2) MWRA to complete design of treatment plant modifications and sludge handling facilities needed to prepare for possible ocean dumping.                  (3) MWRA to complete preparation of hauling contract documents.                  (4) MWRA to determine feasibility of continuing or expanding Deer Island composting pilot program.                  (5) [MWRA to report by July 15 on *operating procedures for Deer Island designed to minimize discharges of sewage into the harbor.]<sup>12</sup></p>	<p>#(1) MWRA to report to Court by July 3, 1986 on implementation of additional CSO Projects.</p>
		<p>#(5) MWRA to file comprehensive project change with MEPA to include mid-term residuals management program, of which dewatering facilities are a part, under RMFP Special Procedure.                  #(6) MWRA to conduct field testing program for Scum management.                  #(7) MWRA to complete design of scum grinding facilities for Deer Island.</p>	

<sup>12</sup> MWRA Proposed Form of Second Interim Order, Attachment A (April 30, 1986), p.3.

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<p><b>Aug. 1986</b></p>	<p>(1) MWRA to complete construction of rebuilt Deer Island sludge thickeners and attain operational level of facilities.</p>	<p>#(1) MWRA to commence dewatering facilities plan. #(2) MWRA to complete field test program for Scum management.</p>	<p>#(1) MWRA to complete the in-vessel composting study. #(2) MWRA to award contract for consultant to prepare Phase II long-term residuals management facilities plan.</p>	<p>(1) MWRA to complete draft facilities plan for shore-side and on-site piers and staging facilities.</p>
<p><b>Sept. 1986</b></p>	<p>(1) DEQE to issue decisions regarding certification of grant applications for Deer Island remote headworks improvement and sedimentation system improvement. (2) EPA to act on step 3 grant applications for Deer Island remote headworks improvements and sedimentation system improvement.</p>	<p>(1) MWRA to receive review of ocean dumping DEIR by EOE. #(2) MWRA to submit to Court implementation plan and schedule for additional planning and environmental review activities necessary to implement mid-term residuals management plan by December, 1991. (3) MWRA to make final decisions on scum technologies and report to Court on Decision and its basis. (4) MWRA to file ENF on Scum removal facilities option.</p>	<p>(1) MWRA to complete DEIR for shore-side and on-site pier and staging facilities.</p>	<p>(1) MWRA to complete final facilities plan for shore-side and on-site pier and staging facilities.</p>
<p><b>Oct. 1986</b></p>	<p>(1) DEQE/EPA to have acted on MWRA request for approval to advertise for bids for construction of Deer Island remote headwork improvements and sedimentation system improvement. (2) MWRA to execute construction contract for Deer Island disinfection system improvements.</p>	<p>(1) MWRA to complete final facilities plan for shore-side and on-site pier and staging facilities.</p>	<p>(1) MWRA to complete final facilities plan for shore-side and on-site pier and staging facilities.</p>	<p>(1) MWRA to complete final facilities plan for shore-side and on-site pier and staging facilities.</p>

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Nov. 1986	<p>(1) MWRA to advertise for bids for construction of Deer Island remote headworks.                  (2) MWRA to advertise for bids for construction of Deer Island primary sedimentation system improvements.</p>	<p>(1) MWRA to receive EOEAs completed review of DEIR for shore-side and on-site pier and staging facilities.</p>
Dec. 1986	<p>(1) MWRA to complete draft facilities plan and DEIR.<sup>13</sup>                  (2) MWRA to complete Draft Environmental Impact Report ("DEIR") for treatment plant modifications and sludge handling facilities needed to prepare for liquid sludge removal from Deer and Nut Island.                  (3) MWRA to submit Report on the progress of its assessment of the feasibility of particular alternative sludge disposal programs for implementation during the 1988-1991 period, including any implementation schedules that have been developed for each potentially feasible program, and any other conclusions that have been drawn.</p>	

<sup>13</sup> MWRA to submit to EOEAs the DEIR for dewatering in time to ensure that the June 1987 date for completing the FEIR is met.

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**CSO Control**

**Month/Year**

<b>Jan. 1987</b>	(1) MWRA to complete DEIR on proposed scum removal facilities option.	(1) MWRA to complete FEIR for shore-side on-site staging facilities and shall request certification of its FEIR by the EOEА.
<b>Feb. 1987</b>	(1) MWRA to execute construction contract for remote headworks.	
<b>March 1987</b>	(1) MWRA to execute construction contract for Deer Island sedimentation system improvements.	(1) MWRA to receive action by the EOEА on its request for certification for shore-side and on-site pier and staging facilities. (2) EPA to issue finding of no significant impact for pier and staging facilities.
<b>April 1987</b>	(1) MWRA to report on shortlisted private and public sector proposals for mid-term and any interim sludge disposal programs, including complete schedules for any remaining environmental review and permitting requirements.	(1) MWRA to make final decisions and accept facilities plan for shore-side and on-site access facilities.

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**Month/Year**

**May 1987**

- (1) MWRA to complete FEIR and request certification of FEIR by EOEa.
- (2) MWRA to award design engineering consultant contract and initiate design of scum removal facilities.
- (3) MWRA to make final decision on its program(s) for eliminating existing sludge discharges by no later than December 1991, and to make final choice of dewatering site if dewatering is part of the selected program.

**June 1987**

- (1) MWRA to complete final facilities plan and FEIR for dewatering facility; request EOEa certificate of findings on adequacy of FEIR.<sup>14</sup>
- (2) MWRA to complete draft facilities plan and site layouts for public sector facilities for the mid-term and any interim sludge disposal program, unless the Court determines that such a facilities plan is not needed.

**July 1987**

- (1) MWRA to receive action from EOEa on request for certification of the FEIR for scum removal plan.

- (1) MWRA to begin site-specific environmental monitoring and field investigations for long-term sludge disposal programs.
- (1) MWRA to complete Draft Candidate Options Evaluation Report for long-term sludge disposal.

<sup>14</sup> MWRA to receive completed EPA environmental review (if EIS is required) no later than November, 1988.

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Aug. 1987

- (1) MWRA to submit an implementation plan and schedule for design and construction of all facilities necessary to enable it to prepare all of the sludge from its existing Deer and Nut Island facilities for disposal at land based facilities which either exist or are reasonably anticipated to be available on an interim basis, without the need to wait for the construction of long term sludge management facilities.
- (2) MWRA to receive EOE action on request for certification of FEIR for dewatering facility.
- (3) MWRA to complete all planning (including any necessary facilities planning) and all Commonwealth of Massachusetts environmental reviews necessary to allow the implementation of the mid-term land-based sludge disposal program (to commence by December 1991, at the latest) and any interim land-based sludge disposal programs (for the period 1988-1991).<sup>15</sup>

<sup>15</sup> MWRA may seek to extend this date by establishing that such an extension is necessary to allow the implementation of the earliest possible land-based sludge disposal program.



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**Month/Year**

Sept. 1987	(1) MWRA to complete design of scum removal facilities.	(1) MWRA to complete draft facilities plan for secondary treatment plant.
Oct. 1987		(1) MWRA to complete DEIR for secondary treatment plant.
Nov. 1987	(1) MWRA to commence design of dewatering facility.	(1) MWRA to complete draft long-term residuals management facilities plan and DEIR.
Dec. 1987		<p>(1) MWRA to receive review [from EOE] of DEIR for secondary treatment plant.</p> <p>(2) MWRA to complete final facilities plan for secondary treatment plant, concluding all facilities planning necessary to site preparation, the treatment facilities, the plant's outfall(s), and the under-harbor tunnel.</p> <p>(3) MWRA to complete design of on-island pier and staging facilities.</p>



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**Month/Year**

<b>Jan. 1988</b>	(1) MWRA to complete construction of Deer Island electrical upgrade and attain operational level of facilities.	(1) MWRA to award construction contract scum removal facilities.	(1) MWRA to complete review of EOEAs, certificate and public comments on siting Reports and Candidates Options and make determinations of any necessary revisions to program and schedule, and report the substance of these determinations to the Court, parties, and EOEAs. (2) MWRA to commence off-site field study program and report to the Court, parties and EOEAs on whether it has obtained access rights to all its sites for the detailed on-site field study and on how it proposes to address in that study any sites to which it has not obtained access rights. Also MWRA to submit proposed Candidate Options evaluation criteria to EOEAs, the parties and the Court.	(1) MWRA to complete design of on-shore pier and staging facilities.
<b>Feb. 1988</b>			(1) MWRA to complete written Response to comments on Siting Reports and Candidate Options and submit it to EOEAs, the parties and the Court.	(1) MWRA to complete FEIR concluding all MWRA environmental review necessary under MEPA for site preparation, the treatment facilities, the plant's outfall(s), and the under-harbor tunnel. (2) MWRA to request certification of the FEIR by the EOEAs.

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**Month/Year**

<p>March 1988</p>	<p>MWRA to submit ENF for short-term sludge processing and transportation facilities to EOEAE.</p>	<p>(1) MWRA to commence detailed on-site field study in accordance with approved scope of work for such study.                  (2) MWRA to commence alternative off-site field study for any sites to which it has not gained access.                  (3) MWRA to provide all field program data developed to date to EPA, MA-DWPC and EOEAE.</p>
<p>April 1988</p>		<p>(1) MWRA to receive action by EOEAE on its request for certification of FEIR.</p>
<p>May 1988</p>		<p>(1) MWRA to complete and submit to EOEAE, the parties, and the Court its final Candidate Options evaluation criteria.                   (2) MWRA to accept bids for construction contract for on-island pier and staging facilities.                  (3) EPA to issue FNSI or SEIS regarding any matters not within the scope of the December 1985 EIS.</p>
<p>June 1988</p>	<p>(1) MWRA to complete construction of Deer Island disinfection system rehabilitation.</p>	<p>(1) MWRA to accept bids for construction contract for on-shore pier and staging facilities.</p>
<p>July 1988</p>		<p>(1) MWRA to provide all field program data developed to date to EPA, MA-DWPC and EOEAE.</p>
<p>Aug. 1988</p>	<p>(1) MWRA to attain operational level of facilities for Deer Island disinfection system rehabilitation.</p>	<p>DCPO to issue RFP for new Suffolk County House of Correction.                   (1) MWRA to award construction contract for on-island pier and staging facilities.</p>

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**Month/Year**

Sept. 1988	(1) MWRRA to complete construction of Deer Island remote headworks improvements.	(1) MWRRA to award construction contract for on-shore pier and staging facilities.
Oct. 1988		
Nov. 1988	(1) MWRRA to attain operational level of facilities for Deer Island remote headwork improvements.	Design/Build Selection Board to make recommendation to Deputy Commissioner.
Dec. 1988	(1) MWRRA to complete construction of all scum removal facilities and commence operation of facilities.	Design/Build Team for Suffolk County House of Correction to be selected and letter of intent issued by DCPD.

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**Month/Year**

Jan. 1989	MWRA to submit draft EIR for short-term sludge processing and transportation facilities to EOEAA, Court and parties.	MWRA to submit Draft EIR and Draft Facilities Plan on Long-Term Residuals Management to EOEAA on or before February 15, 1989. <sup>16</sup>	Ground breaking for New Suffolk County House of Correction.
Feb. 1989			
March 1989	(1) MWRA to complete construction of Deer Island sedimentation system improvements.	Parties to complete their review of the draft EIR for short-term sludge processing and transportation facilities and submit comments to MWRA on or before March 15, 1989.	
April 1989		MWRA to submit final EIR for short-term sludge processing and transportation facilities to EOEAA, Court and parties.	
May 1989	(1) MWRA to attain operational level of facilities for Deer Island sedimentation system improvements.		MWRA to receive MEPA Certificate on Draft EIR and Draft Facilities Plan on Long-Term Residuals Management on or before May 19, 1989.
June 1989		MWRA to obtain EOEAA certification on FEIR for short-term sludge processing and transportation facilities.	
July 1989			

<sup>16</sup> EPA to complete DEIS three months after MWRA completes its DEIR.

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**Month/Year**

Aug. 1989	MWRRA to complete design of all short-term sludge related facilities at Nut Island, Deer Island and the Fore River Staging Area.	MWRRA to complete FEIR and Final Facilities Plan for Long-Term Residuals Management and to request certification of the FEIR by EOEAA. <sup>17</sup>
Sept. 1989		(1) MWRRA to complete construction of on-island pier and staging facilities.
Oct. 1989	(1) MWRRA to complete construction of Deer Island power and pump improvements and attain operational level of facilities.	(1) MWRRA to attain operational status of on-island pier and staging facilities.
Nov. 1989	Commence demolition, Fore River Staging Area.	MWRRA to receive EOEAA's certificate on FEIR/Final Facilities Plan on Long-Term Residuals Management on or before November 6, 1989. <sup>18</sup>
Dec. 1989	Commence pile driving and construction of foundation, Fore River Staging Area.	MWRRA to make final decision and accept Long-Term Residuals Management Facilities Plan.

<sup>17</sup> EPA to complete FEIS three months after MWRRA completes its FEIR.

<sup>18</sup> EPA to complete its Record of Decision three months following EOEAA's certification on the FEIR.

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**Month/Year**

<b>Month/Year</b>	<b>CSO Control</b>	<b>Long-Term Sludge Management</b>	<b>New Boston Harbor Secondary Treatment Plant</b>
Jan. 1990			
Feb. 1990		Commence construction of processing facility, Fore River Staging Area. Commence Pier Three rehabilitation.	
March 1990			
April 1990			
May 1990			(1) Complete construction of on-shore piers and staging areas.
June 1990		Commence construction, Deer Island and Nut Island facilities.	(1) On-shore piers and staging areas attain operational status.
July 1990			
Aug. 1990			
Sept. 1990			
Oct. 1990			MWRA to have electrical power available on Deer Island sufficient to commence construction of the new tunnels and the primary plant.
Nov. 1990			
Dec. 1990			MWRA to commence construction of primary treatment facilities (primary phase 1).

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 1991			MWRA to commence construction of new effluent outfall tunnel.
Feb. 1991			
March 1991			
April 1991			MWRA to commence construction of inter-island wastewater transmission tunnel.
May 1991			
June 1991			
July 1991			
Aug. 1991			MWRA to commence construction of residuals facilities at Deer Island to support primary clarifier batteries.
Sept. 1991		MWRA to complete construction of all short-term sludge processing and transportation facilities. <sup>19</sup>	
Oct. 1991			

<sup>19</sup> Completion of construction of all facilities means operational completion of two sludge process trains and all ancillary facilities necessary to support two trains at Fore River Staging Area and all facilities at Deer Island and Nut Island. Two additional process trains for redundancy purposes will be operationally complete by December 1991.

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**Month/Year**

Nov. 1991	MWRA to submit 100% design of the landfill to DEP for approval.	MWRA will commence land-based disposal of all discharges from existing Deer Island and Nut Island facilities.	Suffolk County House of Correction to be decommissioned for purposes of demolition to build the new wastewater treatment plant. MWRA to receive permission to enter that property. The House of Correction shall be decommissioned earlier if reasonably possible.
Dec. 1991			



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**Month/Year**

Jan. 1992

Feb. 1992

March 1992

(1) MWRA to commence CSO flow measurement, sewer system inspections and data collection, and any other work necessary to update and refine the CSO facilities plan.  
(2) MWRA to commence SOP data collection and evaluation.<sup>20</sup>

April 1992

MWRA to obtain DEP determination on request for approval of final design plans for residuals landfill.

May 1992

June 1992

MWRA to submit plan and schedule for monitoring the impact of the new effluent outfall tunnel on water quality in Massachusetts Bay.

July 1992

<sup>20</sup> SOP data collection shall include: (a) collection of data on interceptors, regulators, and pumping facilities needed for use in developing an optimization plan; (b) development of a hydraulic model for evaluation of the capacity of the interceptor system under various flow conditions, in order to estimate wet-weather intercept capacity available at each regulator or interconnected group of regulators within the system; and (c) determination of the intercept capacity of each regulator which is required to pass all system flows through to Deer Island, and comparison of that capacity to the intercept capacity of the regulator under future "No Action" conditions as defined in the CSO facilities plan (i.e., with the availability of the new outfall and primary treatment capacity at Deer Island) to identify those regulators or regulator groups which will cause surcharging and CSO overflows.

SOP data evaluation shall include: (a) for each inadequate interceptor segment and combined sewer regulator, develop alternatives (at the planning level) which might improve the hydraulic capacity; (b) review each alternative based on cost, constructability, and other factors, and choose those which should proceed to preliminary design; and (c) develop the selected solutions for each identified problem area to the preliminary design stage through the development of plan and profile drawings of each proposed improvement showing major dimensions and elevations and development of pre-design level construction cost estimates for each.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Aug. 1992			
Sept. 1992			
Oct. 1992			
Nov. 1992			
Dec. 1992			

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**Month/Year**

<b>Jan. 1993</b>	(1) MWRA to commence construction of the first battery of secondary treatment (battery A).
<b>Feb. 1993</b>	MWRA to submit report to EPA and CLF on results of CSO flow measurement, sewer system inspections and data collection, and any other CSO-related work completed or in progress. Such report shall include revised CSO flow projections resulting from upgrades and refinements to the CSO sewer system model, and an analysis of the impact of such revised flow projections on the recommendations of the CSO facilities plan.
<b>March 1993</b>	MWRA to complete SOP data collection.
<b>April 1993</b>	
<b>May 1993</b>	
<b>June 1993</b>	MWRA to complete SOP data evaluation, and submit final SOP report to EPA.

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July 1993

Aug. 1993

Sept. 1993

Oct. 1993

Nov. 1993

MWRA to give notice to proceed for contract for backup residuals disposal and implement Emergency Preparedness Plan according to Plan schedule.

Dec. 1993

MWRA to complete the collection and analysis of all data necessary to determine baseline CSO flows, and transmit in writing its results and conclusions to the parties.

Parties to review need for exigency plan for use of existing outfalls for South System flows.<sup>21</sup>

<sup>21</sup> The water quality data to be used in this review shall be based upon findings, programs, protocols and data developed pursuant to the Statement of Agreement among the parties with respect to Water Quality Data Applicable to Operation of Inter-Island Tunnel dated April 14, 1989.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 1994			(1) MWRA to commence construction of secondary residuals facilities at Deer Island to support the first two batteries of secondary treatment (batteries A and B).
Feb. 1994			
March 1994	MWRA to complete the collection and analysis of all data necessary to determine baseline CSO water quality impacts, and transmit in writing its results and conclusions to the parties.		
April 1994			4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.
May 1994			

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**June 1994**

MWRA to submit to parties a report evaluating alternative methods of CSO control, including, without limitation, a deep tunnel storage system modified (if appropriate) based on revised estimates of CSO flows, as well as any additional control methods deemed appropriate by MWRA. The report shall include a preliminary estimate of the cost and performance of each alternative, including the number, location, and volume of overflows which would remain after implementation of the alternative, and the water quality impacts of the remaining overflows.

**July 1994**

MWRA to complete construction and commence operation<sup>22</sup> of first two primary clarifier batteries (batteries A and B) and related facilities at Deer Island necessary for the operation of the first two primary clarifier batteries, including necessary facilities for the processing of residuals.<sup>23</sup>

<sup>22</sup> "Complete construction and commence operation" means substantial completion of these primary facilities, with these facilities accepting flows for treatment. Substantial completion will be followed by a period of start-up which will culminate in the consistent achievement of primary treatment for flows within six months of the above date.

<sup>23</sup> The Authority shall propose a date for the commencement of construction of Deer Island facilities for the processing of residuals upon the completion of planning and final approvals of those facilities in December 1989 and, thereafter, in consultation with the parties, shall develop and propose a schedule for the construction of long-term residuals management facilities. If the parties are unable to agree on the date for the commencement of construction of Deer Island facilities for the processing of residuals and/or on the schedule for construction of long-term residuals management facilities, then any party may move the Court to order that a proposed date or schedule be adopted.

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**Aug. 1994**

**Sept. 1994**

MWRA to submit to parties a draft conceptual plan for CSO control.<sup>24</sup> The plan shall identify and shall include a preliminary evaluation of potential sites for any recommended facilities, in order to demonstrate that the plan can be feasibly implemented, and shall include a proposed schedule and a description of the process for obtaining those sites. The plan shall also include a proposed schedule for completion of the facilities planning process, and for design and construction of the facilities.

**Oct. 1994**

**10/15:** MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

<sup>24</sup> If the plan includes proposals to downgrade water quality standards (including the establishment of "partial use" designations) or bypasses of treatment facilities, it shall set forth the regulatory criteria for approval of such downgrades or bypasses, and shall present the data and analysis which establish that those criteria can be met.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Nov. 1994			
Dec. 1994	<p>MWRA to submit to parties a final conceptual plan for CSO control, including proposed schedules for site acquisition, for completion of the facilities planning process, and for design and construction of the facilities. The parties shall attempt to reach agreement on the nature of the facilities and a schedule for their construction, to be incorporated into an order of the Court. In the event that such agreement is not reached, each party reserves the right to propose its own plan and/or schedule to the Court.</p>		<p>MWRA to complete construction of inter-island wastewater transmission tunnel.</p>



<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 1995		MWRA to commence construction of facility modifications at Fore River Staging Area necessary for processing sludge produced by secondary treatment.	
Feb. 1995			
March 1995			
April 1995		4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.	
May 1995			

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
June 1995			
July 1995			<p>(1) MWRRA to complete construction and commence operation<sup>22</sup> of second two primary clarifier batteries (batteries C and D) and related facilities at Deer Island necessary for the operation of the second two primary clarifier batteries, including facilities for the processing of residuals.</p> <p>(2) MWRRA to complete construction and commence operation of new effluent outfall tunnel.</p> <p>(3) MWRRA to complete all other facilities necessary to permit acceptance of South System flows through the new primary facilities.<sup>25</sup></p>
Aug. 1995			
Sept. 1995			

<sup>25</sup> The new primary facilities are to begin accepting South System flows at this time for discharge through the new outfall tunnel. In the event of the unavailability of the new outfall tunnel at this time, the new primary facilities shall begin accepting South System flows if, after completion of the water quality data review procedure referenced in the December 1993 milestone, the parties agree that accepting such discharges is desirable, or in the event the parties cannot reach such an agreement, then any party may move the Court for appropriate relief. The MWRRA will cease operation of the Nut Island treatment facility within six months following initiation of treatment of all South System flows at the new Deer Island primary facilities.

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**Oct. 1995**

MWRA to report on progress toward completion of Memoranda of Understanding or other formal agreements with Boston Water & Sewer Commission (BWSC), Cambridge, Chelsea, and Somerville to define roles, responsibilities and schedules for implementing the CSO projects.

**10/15:** MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**Nov. 1995**

**Dec. 1995**

MWRA to complete a Siting Report evaluating potential CSO facility sites, designating preferred site alternatives, and identifying any site specific acquisition issues.

MWRA to commence construction of second secondary battery (battery B).

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 1996			
Feb. 1996			
March 1996			
April 1996	MWRA, in cooperation with BWSC, to assure commencement of construction of Neponset River sewer separation. <sup>26</sup> MWRA, in cooperation with Somerville, to assure commencement of construction of baffle manhole separation at SOM 001 and SOM 006-007. <sup>26</sup>	4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.	
May 1996	MWRA to submit a report to EPA identifying preferred sites, including critical sites, and also including a process and schedule for acquisition of critical sites. Any party may move to incorporate into this Order a schedule for the acquisition of critical sites.		

<sup>26</sup> This work will be financed by the MWRA, but the parties contemplate that designated projects located in Boston, Cambridge, and Somerville will be actually performed by BWSC, the City of Cambridge, and the City of Somerville, respectively. Projects located in Chelsea will be performed by the MWRA, with support from the City of Chelsea. The March 15, 2006 Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflows shall remain in full force and effect.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
June 1996	<p>MWRA to commence design of Fox Point, Commercial Point, Cottage Farm, Prison Point and Somerville Marginal facility upgrades.<sup>27</sup></p> <p>MWRA to execute Memoranda of Understanding or other formal agreements with BWSC, Cambridge, Chelsea and Somerville (the "CSO Communities") to define roles, responsibilities and schedules for implementing the CSO projects.</p> <p>MWRA, in cooperation with BWSC, to assure commencement of design of South Dorchester Bay sewer separation.<sup>26</sup></p>		
July 1996			
Aug. 1996			
Sept. 1996	<p>MWRA, in cooperation with the CSO communities, to assure commencement of design for region-wide floatables controls<sup>28</sup> and outfall closing projects.<sup>26</sup></p>		

<sup>27</sup> The parties recognize that there may be a need to coordinate the design and construction of certain projects, for example the Somerville Marginal upgrade, with the Central Artery and I-93 projects. The MWRA reserves the right to seek adjustment of this schedule if necessary to achieve such coordination.

<sup>28</sup> Floatables control projects may include measures other than those recommended in the December 1994 Final CSO Conceptual Plan. Measures appropriate for individual outfalls will be selected following completion of the design phase for each outfall.

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Oct. 1996	<p><b>10/15:</b> MWRA to submit draft Facilities Plan/EIR for those projects for which an EIR was required by EOE's July 14, 1995 Record of Decision.</p>	<p><b>10/15:</b> MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.</p>	<p>MWRA to complete construction and commence operation<sup>29</sup> of first secondary battery (battery A), and related facilities at Deer Island necessary for the operation of the first secondary battery, including facilities for processing of residuals.</p>
Nov. 1996			
Dec. 1996	<p>Parties to complete review and provide any comments to MWRA on draft Facilities Plan.</p>	<p>MWRA, in cooperation with Somerville, to assure completion of construction of baffle manhole separation at SOM 001 and SOM 006-007.<sup>26</sup></p>	

<sup>29</sup> "Complete construction and commence operation" means substantial completion of the secondary treatment facility, with the facility accepting flow. Substantial completion is expected to be followed by a period of start-up which will culminate in the consistent achievement of secondary treatment within six months of the above date.

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**Month/Year**

**Jan. 1997**

I/1: MWRA to implement "nine minimum controls" required by EPA's April 1994 CSO Policy for MWRA owned or operated system, and to continue such implementation thereafter.<sup>30</sup>

MWRA, in cooperation with the CSO communities, to assure completion of SOP projects recommended in MWRA's June 1993 report titled "System Optimization Plans for CSO Control" and its November 1994 report titled "Supplemental Report on System Optimization Plans for CSO Control."<sup>26</sup>

MWRA, in cooperation with BWSC, to assure commencement of design of Constitution Beach sewer separation.<sup>26</sup>

MWRA, in cooperation with Cambridge, to assure commencement of design for sewer separation at CAM 002 and 004.<sup>26</sup>

<sup>30</sup>

The "nine minimum controls" are: (1) proper operation and regular maintenance programs for the sewer system and the CSOs, (2) maximum use of the collection system for storage, (3) review and modification of pretreatment requirements to assure CSO impacts are minimized, (4) maximization of flow to the POTW for treatment, (5) prohibition of CSOs during dry weather, (6) control of solid and floatable materials in CSOs, (7) pollution prevention, (8) public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts, and (9) monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.



<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
<b>Feb. 1997</b>	<p>MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup></p>		
<b>March 1997</b>			
<b>April 1997</b>		<p><b>4/15:</b> MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.</p>	
<b>May 1997</b>			
<b>June 1997</b>			

<sup>31</sup> For purposes of this schedule, all references to CSO projects are to the projects described in the MWRA's 1997 Final CSO Facilities Plan unless otherwise noted. The projects related to the long-term CSO control plan for North Dorchester Bay and Reserved Channel are described in MWRA's April 27, 2004 Supplemental Facilities Plan and Environmental Impact Report. The projects related to the Long-Term CSO Control Plan for Alewife Brook are described in MWRA's July 2003 Final Variance Report for Alewife Brook and the Upper Mystic River. The projects related to the Long-Term CSO Control Plan for the Charles River are described in MWRA's August 2, 2005 Recommendations and Proposed Schedule for Long-Term CSO Control for the Charles River, Alewife Brook and East Boston.



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**Month/Year**

**July 1997**

MWRA to submit Final Facilities Plan/EIR for those projects for which an EIR was required by EOEAs July 14, 1995 Record of Decision.

MWRA to commence design of Chelsea Branch Relief Sewer; hydraulic relief for CAM 005; and, in cooperation with Chelsea, to commence design of trunk sewer relief for CHE 002-004.<sup>26</sup>

**Aug. 1997**

MWRA to complete construction and commence operation of facility modifications at Fore River Staging Area necessary for processing sludge produced by secondary treatment.

**Sept. 1997**

**Oct. 1997**

MWRA to obtain MEPA certification for Final EIR for those projects for which an EIR was required by EOEAs July 14, 1995 Record of Decision, and obtain DEP action on Final Facilities Plan.

**10/15:** MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Nov. 1997**

Parties to review the need for interceptor connection relief for BOS 032 based upon post-sewer-separation metering results. If the parties are unable to reach agreement on the need for interceptor connection relief, any party may thereafter move the Court for relief.<sup>36</sup>

**Dec. 1997**

Based upon the results and Certificate by MEPA of the Final EIR/Facilities Plan, DEP to make formal administrative determinations for all CSO-impacted water bodies (or segments thereof) regarding the appropriate regulatory designations, and for any partial use determinations DEP will initiate the process of revising its Water Quality Standards to formally incorporate that determination into the Commonwealth's Water Quality Standards. These formal determinations will be filed with EPA<sup>32</sup> and MWRA. If the regulatory determinations affecting water quality standards in CSO-impacted receiving waters anticipated by the MWRA's December 1994 Final CSO Conceptual

MWRA to complete construction and commence operation<sup>29</sup> of second secondary battery (battery B) and related facilities at Deer Island necessary for the operation of the second secondary battery, including facilities necessary for the processing of residuals.

<sup>32</sup>

This milestone is not intended to prejudge the question of what modifications to water quality standards or appropriate administrative determinations may be appropriate based on the MWRA CSO plan. It is anticipated that EPA will act on any modifications or determinations proposed by DEP within the time provided by 40 C.F.R. § 131.21.

New Boston Harbor  
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Treatment Plant

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CSO Control

Month/Year

**Dec. 1997  
(continued)**

Plan (including requisite EPA approvals) are not made pursuant to this milestone, any party may move the Court for appropriate relief.

Parties to review the need for additional CSO facilities and/or studies for the Charles River. If the parties are unable to reach agreement on the need for additional facilities and studies, the nature of such facilities and studies, or a schedule for implementation of such facilities and studies, any party may thereafter move the Court for relief.<sup>33</sup>

<sup>33</sup> If the parties agree or the Court orders that additional CSO facilities shall be constructed for the Charles River, the parties shall review whether the CSO facilities for the Charles River otherwise required by this Order continue to be appropriate, either as part of the ultimate CSO control plan or as interim steps until the additional facilities are constructed. Following this review, any party may move the Court for appropriate relief.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 1998			
Feb. 1998	MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>		
March 1998	MWRA to commence construction of Cottage Farm facility upgrade.		
April 1998			4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.
May 1998			
June 1998			

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**July 1998**

Except for CSO facilities discharging to the Charles River, Alewife Brook, and the Mystic River above the Earhart Dam, MWRA to evaluate and report to EPA and DEP on whether the CSO facilities required by this Order will result in compliance with then-existing water quality standards. Within four (4) months after the expiration of any water quality standards variance for the Charles River, Alewife Brook, and the Mystic River above the Earhart Dam, MWRA to evaluate and report to EPA and DEP on whether CSO facilities required by this Order discharging to those receiving waters will result in compliance with then-existing water quality standards. If CSO facilities will not result in compliance with such standards, any party may move for appropriate relief.

MWRA, in cooperation with Cambridge, to assure commencement of construction of sewer separation at CAM 002 and 004.<sup>26</sup>

MWRA, in cooperation with BWSC, to commence design of Stony Brook sewer separation.<sup>26</sup>

**Aug. 1998**

**Sept. 1998**

MWRA to submit SEIR for Commercial Point, Somerville Marginal, and Prison Point facility upgrades.

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Oct. 1998**

10/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**Nov. 1998**

MWRA to obtain MEPA certification for SEIR for Commercial Point, Somerville Marginal, and Prison Point facility upgrades.

**Dec. 1998**

MWRA, in cooperation with Chelsea, to commence design of outfall repairs and floatables control at CHE 008.

MWRA to submit interim report to the parties on progress of its field testing program for floatables control.<sup>34</sup>

MWRA to submit SEIR for Fox Point facility upgrade.

<sup>34</sup>

The field testing program shall be conducted as described in MWRA's "Proposed Monitoring Plan, Field Testing Program for Underflow Baffles," dated March 7, 1997 and EPA's letter dated March 19, 1997, as amended by "MWRA Interim Report on Field Testing Program for Underflow Baffles" dated January 30, 1998.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
<b>Jan. 1999</b>			
<b>Feb. 1999</b>	<p>MWRA to obtain MEPA certification for SEIR for Fox Point facility upgrade.</p> <p>MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup></p>		
<b>March 1999</b>	<p>MWRA to complete construction of Cottage Farm facility upgrade.<sup>35</sup></p> <p>MWRA, in cooperation with CSO communities, to assure commencement of construction of regionwide floatables controls and outfall closing projects.<sup>26</sup></p>		
<b>April 1999</b>	<p>MWRA, in cooperation with BWSC, to assure commencement of construction of South Dorchester Bay sewer separation. At least ten percent of this construction shall take place each year, in order to ensure that the project is completed by November, 2008.<sup>26</sup></p> <p>MWRA, in cooperation with BWSC, to assure commencement of construction of Constitution Beach sewer separation.<sup>26</sup></p>	<p><b>4/15:</b> MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.</p>	

<sup>35</sup> Completion of construction will be followed by a period of start-up and systems optimization consisting of five activations of at least four hours duration each, which is to culminate in the consistent achievement of effective treatment of flows, as defined by NPDES permit requirements.

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

May 1999	MWRA to commence construction of Prison Point facility upgrade.
June 1999	
July 1999	
Aug. 1999	MWRA to commence construction of hydraulic relief for CAM 005.
Sept. 1999	MWRA, in cooperation with Chelsea, to commence construction of trunk sewer relief for CHE 002-004. <sup>26</sup>
Oct. 1999	10/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.
Nov. 1999	MWRA to commence construction of Fox Point, Commercial Point, and Somerville Marginal facility upgrades.
Dec. 1999	MWRA to commence design of detention/treatment facility at Union Park Pump Station.  MWRA to commence construction of Chelsea Branch Relief Sewer.

MWRA to complete construction and commence operation<sup>29</sup> of final secondary battery (battery C) and related facilities at Deer Island necessary for the operation of the third secondary battery,<sup>36</sup> including facilities for the processing of residuals.<sup>37</sup> The MWRA shall preserve sufficient space for a fourth secondary battery until further order of the Court.

<sup>36</sup> Related facilities will include a polymer addition facility to be connected to all secondary batteries.

<sup>37</sup> MWRA is to achieve full operation of the secondary wastewater treatment facilities in compliance with effluent limitations and other requirements of the Act and all applicable regulations and permits within six months of the above date.



**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Jan. 2000**

**Feb. 2000**

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

MWRA to submit a final report on the results of its field testing program for floatables control.<sup>34</sup> If the parties are not in agreement on the use of underflow baffles for floatables control, they shall review the need to revise the plans and schedule for projects including baffles. If the parties are unable to reach agreement on alternative technology or dates, any party may move the Court for relief.

**March 2000**

MWRA to commence design of interceptor relief for BOS 003-014.

**April 2000**

**4/15:** MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**May 2000**

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**June 2000**

MWRA, in cooperation with BWSC, to assure completion of construction of Neponset River sewer separation.<sup>26</sup>

**July 2000**

MWRA, in cooperation with Chelsea, to commence construction of outfall repairs and floatables control at CHE 008.<sup>26</sup>

MWRA, in cooperation with BWSC, to commence construction of Stony Brook sewer separation. At least 15 percent of this construction shall take place each year, in order to ensure that the project is completed by September, 2006.<sup>26</sup>

**Aug. 2000**

MWRA, in cooperation with Chelsea, to complete construction of trunk sewer relief for CHE 002-004.<sup>26</sup>

MWRA to complete construction of hydraulic relief for CAM 005.

**Sept. 2000**

**Oct. 2000**

MWRA, in cooperation with BWSC, to assure completion of construction of Constitution Beach sewer separation.<sup>26</sup>

MWRA to complete construction of Prison Point facility upgrade.<sup>35</sup>

**10/15:** MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**Nov. 2000**

**Dec. 2000**

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

<b>Jan. 2001</b>	<p>MWRA to submit to EPA and DEP a report on results of additional flow metering and system hydraulic modeling to evaluate CSO discharge activations and volumes to the Dorchester Brook Conduit.</p>	
<b>Feb. 2001</b>	<p>MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup></p>	
<b>March 2001</b>	<p>MWRA to complete construction of Fox Point, Commercial Point and Somerville Marginal facility upgrades.<sup>35</sup></p>	
<b>April 2001</b>		<p><b>4/15:</b> MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.</p>
<b>May 2001</b>	<p>MWRA, in cooperation with CSO communities, to assure completion of construction of region-wide floatables controls and outfall closing projects.<sup>26</sup></p>	
<b>June 2001</b>	<p>MWRA to complete construction of Chelsea Branch Relief Sewer and, in cooperation with Chelsea, outfall repairs and floatables control at CHE 008.<sup>26</sup></p>	
<b>July 2001</b>		

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Aug. 2001**

**Sept. 2001**

**Oct. 2001**

**10/15:** MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**Nov. 2001**

**Dec. 2001**

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

Jan. 2002

Feb. 2002

March 2002

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

April 2002

4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

May 2002

June 2002

July 2002

MWRA, in cooperation with BWSC, to commence design of sewer separation and system optimization for BOS 072 and BOS 073.

Aug. 2002

Sept. 2002



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Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

Jan. 2003

MWRA to commence design of hydraulic relief for BOS 017 and storage conduit for BOS 019.

Feb. 2003

March 2003

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

MWRA to commence construction of detention/treatment facility at Union Park Pump Station; and interceptor relief for BOS 003-014.

April 2003

4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

May 2003

June 2003

July 2003

Aug. 2003

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Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Sept. 2003**

**Oct. 2003**

**10/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.**

**Nov. 2003**

**Dec. 2003**



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Treatment Plant**

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Sludge Management**

**CSO Control**

**Month/Year**

**Jan. 2004**

**Feb. 2004**

**March 2004**

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

**April 2004**

**4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.**

**May 2004**

**June 2004**

**July 2004**

**Aug. 2004**

**Sept. 2004**

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Oct. 2004**

10/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.

**Nov. 2004**

**Dec. 2004**

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2005			
Feb. 2005			
March 2005	<p>MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup></p> <p>MWRA to commence construction of hydraulic relief for BOS 017; and storage conduit for BOS 019.</p> <p>MWRA, in cooperation with BWSC, to commence construction of sewer separation and system optimization for BOS 072 and BOS 073.</p>		
April 2005		<p>4/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.</p>	
May 2005			
June 2005	<p>MWRA, in cooperation with BWSC, to commence design of Morrissey Boulevard storm drain.</p>		
July 2005			

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Aug. 2005			
Sept. 2005	MWRA to complete construction of detention and treatment facility at Union Park Pump Station. <sup>35</sup>		
Oct. 2005		10/15: MWRA to report to Court and parties on actions taken pursuant to backup residuals disposal plan during preceding six months. MWRA and Commonwealth to report jointly on implementation of the Memorandum of Understanding regarding the beneficial use of biosolids.	
Nov. 2005			
Dec. 2005			

**New Boston Harbor  
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Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Jan. 2006**

**Feb. 2006**

**March 2006**

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

**April 2006**

MWRA to commence 12-month optimization study to identify operating procedures at Prison Point and related structures that will minimize treated discharges from the Prison Point facility without increasing untreated overflows elsewhere.

**May 2006**

MWRA, in cooperation with BWSC, to complete construction of Pleasure Bay storm drain improvements.

**June 2006**

MWRA to resume design of interceptor relief for BOS 003-014.

**July 2006**

MWRA, in cooperation with BWSC, to commence design of Reserved Channel sewer separation. MWRA, in cooperation with Cambridge, to commence design of CAM400 manhole separation; and to commence design of interceptor connection relief and floatables control at CAM002, CAM401B, and SOM01A and floatables control at CAM001.<sup>26</sup>

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Aug. 2006	Mwra to commence construction of North Dorchester Bay storage tunnel and related facilities.		
Sept. 2006	Mwra to complete construction of hydraulic relief for BOS 017 and storage conduit for BOS 019.		
	Mwra, in cooperation with BWSC, to complete construction of Stony Brook sewer separation. <sup>26</sup>		
	Mwra to commence design of the Brookline Connection, Cottage Farm overflow chamber interconnection, and Cottage Farm gate control.		
Oct. 2006			
Nov. 2006	Mwra, in cooperation with BWSC, to commence design of Bulfinch Triangle sewer separation. Mwra, in cooperation with Brookline, to commence design of Brookline sewer separation. <sup>26</sup>		
Dec. 2006	Mwra, in cooperation with BWSC, to commence construction of Morrissey Boulevard storm drain.		

**New Boston Harbor  
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Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Jan. 2007**

**Feb. 2007**

**March 2007**

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

MWRA, in cooperation with BWSC, to complete construction of sewer separation and system optimization for BOS 072 and BOS 073.

MWRA to submit report on, and commence implementation of measures that optimize operation of dry weather pumps and influent gates at Prison Point and related structures in part to maximize upstream storage. MWRA to propose flow limits for Prison Point facility based on the results of the optimization study commenced on April 1, 2006.

**April 2007**

**May 2007**

**June 2007**

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
July 2007	MWRA, in cooperation with Cambridge, to commence construction of CAM400 manhole separation; and to commence construction of CAM004 stormwater outfall and detention basin. <sup>26</sup>		
Aug. 2007			
Sept. 2007			
Oct. 2007			
Nov. 2007			
Dec. 2007	MWRA, in cooperation with Cambridge, to complete floatables control at outfalls CAM007, CAM009, CAM011, and CAM017. <sup>26</sup>		



<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
<b>Jan. 2008</b>	<p>MWRA to commence design of Charles River Valley/South Charles River Relief Sewer gate controls and evaluation of additional Charles River interceptor interconnection alternatives; and, in cooperation with Cambridge, to commence construction of interceptor connection relief and floatables control at CAM002, CAM401B, and SOM01A, and floatables control at CAM001.<sup>26</sup></p>		
<b>Feb. 2008</b>			
<b>March 2008</b>	<p>MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup></p>		
<b>April 2008</b>			
<b>May 2008</b>			
<b>June 2008</b>	<p>MWRA to commence construction of the Brookline Connection, Cottage Farm overflow chamber interconnection, and Cottage Farm gate control. MWRA to commence construction of interceptor relief for BOS003-014.</p>		
<b>July 2008</b>	<p>MWRA, in cooperation with Cambridge, to complete construction of CAM400 manhole separation.<sup>26</sup></p>		

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**Long-Term  
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**CSO Control**

**Month/Year**

Aug. 2008

Sept. 2008

Oct. 2008

Nov. 2008

MWRA, in cooperation with BWSC, to assure completion of construction of South Dorchester Bay sewer separation.<sup>26</sup>

MWRA, in cooperation with BWSC, to commence construction of Bulfinch Triangle sewer separation. MWRA, in cooperation with Brookline, to commence construction of Brookline sewer separation.<sup>26</sup>

Dec. 2008

MWRA, in cooperation with Cambridge, to ensure completion of construction for interceptor connection relief and floatables control at CAM002, CAM401B, and SOM01A, and floatables control at CAM001.<sup>26</sup>

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Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Jan. 2009**

MWRA to complete evaluation of additional Charles River interceptor interconnection alternatives and submit related report to EPA and DEP. Such report shall include reasonably expeditious schedules for completing projects that can be completed for low cost, that do not have unexpected construction impacts, and that result in a meaningful reduction in overflow volume or frequency.

**Feb. 2009**

**March 2009**

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

**April 2009**

MWRA to commence design of control gate/floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief. MWRA to commence implementation of additional Charles River interceptor interconnection projects in compliance with the schedules submitted pursuant to the related January 2009 milestone.

**May 2009**

MWRA, in cooperation with BWSC, to commence construction of Reserved Channel sewer separation.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
June 2009	<p>MWRA, in cooperation with BWSC, to complete construction of Morrissey Boulevard storm drain.</p> <p>MWRA to complete construction of the Brookline Connection, Cottage Farm overflow chamber interconnection, and Cottage Farm gate control.</p>		
July 2009	<p>MWRA, in cooperation with Cambridge, to complete construction of CAM004 stormwater outfall and detention basin, and to commence construction of CAM004 sewer separation.<sup>26</sup></p>		
Aug. 2009			
Sept. 2009			
Oct. 2009			
Nov. 2009			
Dec. 2009			

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**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

<b>Jan. 2010</b>	MWRA to commence construction of Charles River Valley Sewer/South Charles River Relief Sewer gate controls.
<b>Feb. 2010</b>	
<b>March 2010</b>	MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>
<b>April 2010</b>	
<b>May 2010</b>	
<b>June 2010</b>	MWRA to complete construction of interceptor relief for BOS003-014.
<b>July 2010</b>	
<b>Aug. 2010</b>	
<b>Sept. 2010</b>	
<b>Oct. 2010</b>	
<b>Nov. 2010</b>	MWRA to commence construction of control gate/floatables control at outfall MWR003 and MWRA Rindge Avenue siphon relief.
<b>Dec. 2010</b>	

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2011	MWRA to complete construction of Charles River Valley Sewer/South Charles River Relief Sewer gate controls.		
Feb. 2011			
March 2011	MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>		
April 2011			
May 2011	MWRA to complete construction of North Dorchester Bay storage tunnel and related facilities.		
June 2011			
July 2011			
Aug. 2011			
Sept. 2011			
Oct. 2011			
Nov. 2011			
Dec. 2011			

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2012	Mwra to complete construction of control gate/floatables control at outfall MWR003 and Mwra Rindge Avenue siphon relief.		
Feb. 2012			
March 2012	Mwra to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>		
April 2012			
May 2012			
June 2012			
July 2012			
Aug. 2012			
Sept. 2012			
Oct. 2012			
Nov. 2012			
Dec. 2012			

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2013	Mwra, in cooperation with Cambridge, to complete construction of CAM 004 sewer separation. <sup>26</sup>		
Feb. 2013			
March 2013	Mwra to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>		
April 2013			
May 2013			
June 2013			
July 2013	Mwra, in cooperation with BWSC, to complete construction of Bulfinch Triangle sewer separation. Mwra, in cooperation with Brookline, to complete construction of Brookline sewer separation. <sup>26</sup>		
Aug. 2013			
Sept. 2013			



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**Month/Year**

**Oct. 2013**

**Nov. 2013**

**Dec. 2013**

**New Boston Harbor  
Secondary  
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**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

Jan. 2014

Feb. 2014

March 2014

MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup>

April 2014

May 2014

June 2014

July 2014

Aug. 2014

Sept. 2014

Oct. 2014

Nov. 2014

Dec. 2014

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2015			
Feb. 2015			
March 2015	MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project. <sup>31</sup>		
April 2015			
May 2015			
June 2015			
July 2015			
Aug. 2015			
Sept. 2015			
Oct. 2015			
Nov. 2015			
Dec. 2015	MWRA, in cooperation with BWSC, to complete construction of Reserved Channel sewer separation.		

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2016			
Feb. 2016			
March 2016	<p>MWRA to submit annual report which describes progress in planning, design, and construction of each CSO project, and identifies any issues which may interfere with timely completion of any project.<sup>31</sup></p>		
April 2016			
May 2016			
June 2016			
July 2016			
Aug. 2016			
Sept. 2016			
Oct. 2016			
Nov. 2016			
Dec. 2016			

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2017			
Feb. 2017			
March 2017			
April 2017			
May 2017			
June 2017			
July 2017			
Aug. 2017			
Sept. 2017			
Oct. 2017			
Nov. 2017			
Dec. 2017			

**New Boston Harbor  
Secondary  
Treatment Plant**

**Long-Term  
Sludge Management**

**CSO Control**

**Month/Year**

**Jan. 2018**

MWRA to commence three-year performance assessment of its Long-Term CSO Control Plan.<sup>38</sup> The assessment shall include post-construction monitoring in accordance with EPA's Combined Sewer Overflow (CSO) Policy, 59 Fed. Reg. 18688 (Apr. 19, 1994).

**Feb. 2018**

**March 2018**

**April 2018**

**May 2018**

**June 2018**

**July 2018**

**Aug. 2018**

**Sept. 2018**

**Oct. 2018**

<sup>38</sup> The documents that comprise the Authority's Long-Term CSO Control Plan are identified in the March 15, 2006, Second Stipulation of the United States and the Massachusetts Water Resources Authority on Responsibility and Legal Liability for Combined Sewer Overflow Control.

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Nov. 2018			
Dec. 2018			

<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2019			
Feb. 2019			
March 2019			
April 2019			
May 2019			
June 2019			
July 2019			
Aug. 2019			
Sept. 2019			
Oct. 2019			
Nov. 2019			
Dec. 2019			



<u>Month/Year</u>	<u>CSO Control</u>	<u>Long-Term Sludge Management</u>	<u>New Boston Harbor Secondary Treatment Plant</u>
Jan. 2020			
Feb. 2020			
March 2020			
April 2020			
May 2020			
June 2020			
July 2020			
Aug. 2020			
Sept. 2020			
Oct. 2020			
Nov. 2020			
Dec. 2020	<p>MWRA to submit results of its three-year performance assessment of its Long-Term CSO Control Plan to the EPA and DEP. MWRA to demonstrate that it has achieved compliance with the levels of control (including as to frequency of CSO activation and as to volume of discharge) specified in its Long-Term CSO Control Plan.</p>		