

UNITED STATES DISTRICT COURT  
for the  
DISTRICT OF MASSACHUSETTS

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.  
UNITED STATES OF AMERICA, .

.  
Plaintiff, .  
. CIVIL ACTION  
v. . No. 85-0489-MA

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METROPOLITAN DISTRICT COMMISSION, .  
et al., .  
.  
Defendants. . .

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

.  
Plaintiff, .  
. CIVIL ACTION  
v. . No. 83-1614-MA

.  
METROPOLITAN DISTRICT COMMISSION, .  
.  
Defendants. .

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MWRA MONTHLY COMPLIANCE REPORT  
FOR JULY 1998 AND  
PROGRESS REPORT AS OF AUGUST 17, 1998

The Massachusetts Water Resources Authority (the "Authority") submits the following monthly compliance report for the month of July 1998 and supplementary compliance information in accordance with the Court's order of December 23, 1985, subsequent orders of the Court and undertakings of the Authority.

I. Schedule Six

A status report for the scheduled activities for the month of July 1998 on the Court's Schedule Six, certified by Douglas B. MacDonald, Executive Director of the Authority, is attached hereto as Exhibit "A."

A. Activities Completed.

1. Combined Sewer Overflow Water Quality Standards Report.

In compliance with the recently amended milestone,1 on July 31, 1998, the Authority reported to the Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("DEP") as to whether the combined sewer overflow ("CSO") facilities required by Schedule Six will result in compliance with existing water quality standards. Based on DEP's approval of the Authority's Final CSO

Facilities Plan,2 DEP's administrative determinations of water quality designations for receiving waters affected by continuing CSO discharges<sup>3</sup> and EPA's approval of those determinations,<sup>4</sup> the Authority concluded that the Court-ordered CSO facilities will result in compliance with existing water quality standards.<sup>5</sup>

## 2. Construction of CAM 002 and 004 Sewer Separation.

Also in compliance with Schedule Six, on July 31, 1998, the City of Cambridge issued three Notices to Proceed for activities related to sewer separation in the areas tributary to CSO outfalls CAM 002 and CAM 004, located on the Alewife Brook. These construction contracts are the first of several anticipated to be required to complete the separation work. Pursuant to agreements with the Authority, Cambridge will oversee design and construction activities, which the Authority will fund. When completed, this project will eliminate CSO discharges at CAM 002 and minimize those at CAM 004.

During the design phase for this project, Cambridge discovered that actual sewer and drain system conditions in several areas differed significantly from the conditions portrayed on the City's plans that were provided to the Authority for use during the Authority's planning efforts. In the first place, Cambridge found that several additional areas originally believed to contain separate storm and sanitary systems in fact have combined sewers. Furthermore, the detailed configuration of the areas tributary to each outfall and the flow patterns within the tributary areas are different than were assumed during the planning phase. The new information and changed conditions have resulted in the need for additional field reconnaissance and design work, which are in progress. In the meantime, it is clear that the scope of the separation work required to achieve the CSO control goal for Alewife Brook in accordance with the Authority's final CSO plan must expand, perhaps by more than fifty percent.

In spite of these circumstances, the City of Cambridge, with great effort, was able to meet the required construction start date of July 1998. However, Cambridge now anticipates that it will be unable to meet the schedule for the completion of this project by January 2000. Cambridge is developing a revised schedule which it will complete once the full scope of the additional work can be determined. Following review, the Authority will report further on this matter.

## 3. Design of Stony Brook Sewer Separation.

Also in compliance with Schedule Six, on July 20, 1998, the Boston Water and Sewer Commission ("BWSC") issued a Notice to Proceed to the project design consultant to begin design services for the separation of sewers tributary to the Stony Brook Conduit and CSO outfalls BOS 046 and MWR 023. The project will minimize CSO discharges from these outfalls to the Back Bay Fens and the Charles River, respectively. Like the arrangement for the work taking place in Cambridge described above, the Authority will fund design and construction, which BWSC will oversee. BWSC expects to complete preliminary design by July 1999 and commence final design immediately thereafter. Schedule Six requires commencement of construction by July 2000.

## B. Progress Report.

### 1. Fiscal Matters.

#### (a) State Funding.

On July 30, 1998, the Governor signed the Commonwealth's budget for fiscal year 1998, following its approval by the Massachusetts Legislature on July 20, 1998. As anticipated, the budget includes \$53.9 million for debt service assistance, both for statewide wastewater projects and for the Authority's MetroWest Water Supply Tunnel, of which the Authority is eligible to receive \$41.4 million. The budget also includes \$31.6 million for the State Wastewater Revolving Fund, \$11.4 million for the Safe Drinking Water Act Revolving Fund and \$500,000 for the operation and maintenance of the Clinton Wastewater Treatment Plant. In addition, the budget includes a provision increasing the Authority's debt cap from \$3.91 billion to

\$4.37 billion and an extension of the repayment period for State Wastewater Revolving Fund loans from 20 to 30 years.

(b) Report on Management Study.

On August 12, 1998, the Authority's Board of Directors received a presentation by HDR Engineering, Inc. ("HDR") on the results of its review of the Authority's management and operations. A copy of the Executive Summary of HDR's written report is attached hereto as Exhibit "B." Following discussion of the various action items recommended by HDR for Board consideration (see page 2 of the Executive Summary), the Board authorized the Management Review Committee that has overseen HDR's work to negotiate with HDR the scope and cost for a second phase of the study, subject to Board review and approval. This phase could address four of the HDR action items, all of which relate to staffing (Action Items Nos. 1, 3, 5 and 6). In addition, the Board authorized the Executive Director to implement the remaining action items, with the exception of No. 8, regarding the Board's policy for sludge disposal, which the Board indicated it did not intend to pursue.

(c) Capital Improvement Program.

Printed copies of the Authority's Capital Improvement Program for Fiscal Years 1999-2001, approved on June 24, 1998, are now available. A copy is attached as Exhibit "C."

2. Harbor Management.

(a) Decommissioning of Nut Island Treatment Plant.

Following a month of successful operation of the new Nut Island Headworks, the Authority determined that it was no longer necessary to retain the availability of the Nut Island Treatment Plant on a stand-by basis. Accordingly, on August 6, 1998, the Authority turned over the Nut Island Treatment Plant to the contractor for demolition. The contractor has completed the cleaning of one digester and is now cleaning a second digester. The Authority is planning a public event early in the Fall to observe the achievement of this particular milestone in the Boston Harbor Project.

In accordance with plans discussed in the Deer Island Staffing Report submitted as Exhibit "C" with last month's report, the Authority is preparing to transfer 25 Nut Island Treatment Plant staff to the Deer Island Treatment Plant during the next month. In the meantime, Nut Island staff are working in coordination with the contractor to prepare the facilities for demolition.

(b) South System (Lydia Goodhue) Pump Station.

In the Lydia Goodhue Pump Station, work continues on resolving the problems with the transformers and harmonic distortion that have limited the availability of all eight pumps within the facility. With respect to the transformers, temporary replacements for the two failed transformers were received last week. One has been installed by the contractor and has been tested. Installation of the second is underway. The Authority expects to receive two additional replacement transformers by the end of the month. One will be used to replace an existing transformer, and one will be available as a spare. In the meantime, the Authority has finalized its review of design alternatives for the permanent replacements for the transformers, and has begun preparations for procurement.

With respect to the harmonic distortion, the design and fabrication of new harmonic filters are proceeding. As reported last month, the Authority expects the design and fabrication to take approximately 14 weeks, with additional time needed for installation, a schedule the Authority is seeking to accelerate. Until some or all of the additional harmonic filters are installed, the Authority will operate no more than four pumps simultaneously in the Lydia Goodhue Pump Station, which will be sufficient to transfer all South System flows 99 percent of the time.

### (c) Thermal Plant.

As anticipated, the contractor turned over the thermal plant (without the digester gas system) to Deer Island Treatment Plant staff on July 15, 1998. With the availability of the permanent boilers, this facility will now meet all the treatment plant's heating and hot water demand. As previously reported, following various modifications to the digester gas system and installation of a cooling water line, performance testing of the digester gas system is expected to resume in November 1998.

### (d) Construction of Effluent Outfall Tunnel.

In the Boston Harbor Project Mid-Year Progress Report filed last month, the Authority anticipated that it would be able to report this month on an updated schedule for the projected completion of the Effluent Outfall Tunnel. The Authority's review is still in progress, and it must defer its report until next month.

During the past month, the contractor continued contact grouting in the tunnel arch. Grouting of both the tunnel arch and invert has been completed to within 750 feet of the shaft. Grouting of the invert has been completed to within 225 feet of the shaft. Grouting progress continues to be slow, and as a result, work on the first pass clean-up and repairs to the tunnel arch remains suspended. However, the contractor currently is inspecting equipment and rail cars in anticipation of restarting this work in the near future. Final clean-up, repairs and removal of utilities have reached a point within 17,325 feet (3.3 miles) of the shaft.

## 3. Combined Sewer Overflow Control.

### (a) Proposed Variance for Charles River CSO Discharges.

The Authority has not yet received the anticipated administrative water quality standards determination from DEP for CSO discharges to the Charles River. However, there has been considerable discussion with DEP and EPA during the past month regarding the conditions of the Variance proposed by DEP in June, and these discussions are continuing.<sup>7</sup>

## 4. Residuals Program.

### (a) Pelletizing Plant Expansion.

During the past month, the contractor for the pelletizing plant expansion began testing systems in the two new dryer trains. Testing and optimization of the components of the trains are expected to continue for a number of weeks.

## 5. Transport System Improvements.

On July 15, 1998, the Board of Directors approved the award of a contract for the Squantum Pumping Station Force Main Rehabilitation. The rehabilitation of the force main is part of the Quincy Pump Facilities improvement project, which involves the replacement of the Quincy, Squantum and Hough's Neck Pump Stations, as well as the rehabilitation of the Quincy and Squantum Force Mains.<sup>8</sup> This contract includes cleaning and lining with cement of 8,100 feet of 30-inch pipe along Wollaston Beach. Construction activities will be restricted to the period from late October to early April to limit impacts to the beach during the recreational season.

## 6. Toxic Reduction and Control.

### (a) Mercury Reduction Program.

As reported from time to time, the Authority's Toxic Reduction and Control Department ("TRAC") has been working for several years on a variety of approaches to reducing levels of mercury entering the Authority's wastewater system. Activities have included organizing a Mercury Products Workgroup of representatives of hospitals and other industries to develop and implement new ways to eliminate or minimize mercury discharges and introduction of a "Safe Harbor" enforcement approach as an incentive to industries to adapt

mercury-reduction strategies.<sup>9</sup> The Authority is beginning to see results from these efforts. Since 1995, mercury contributions from industry have dropped from a peak average yearly load of 7.75 pounds per year to five pounds per year. Also, 29 major hospitals and medical centers, a major source of the mercury, have reduced their average mercury discharge levels significantly. Since 1995, average mercury discharge concentrations from those facilities dropped from 22 parts per billion ("ppb") to 3.6 ppb. Among the 29 facilities, 92 percent have reduced their average mercury discharges to ten ppb or lower: 77 percent have dropped to below four ppb; and 27 percent have achieved one ppb or lower.

In continuation of its efforts to reduce mercury levels, the Authority has joined with the Executive Office of Environmental Affairs in its Strategic Envirotechnology Partnership ("STEP"), a program to encourage use of innovative technologies to protect the environment. Vendors are installing promising mercury treatment technologies at three medical or laboratory facilities in the Authority's service area for pilot testing.

By its attorneys,

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Dated: August 17, 1998

Notes:

1. During the coming month, the Authority will revise Schedule Six to incorporate the changes in milestones resulting from the Court's allowance of the Joint Motion filed on July 24, 1998 and will circulate copies to the parties for their review. Upon the assent of the parties, the Authority will submit the revised schedule to the Court.
2. See Compliance and Progress Report dated November 17, 1997, pp. 2-8.
3. See Compliance and Progress Report dated January 15, 1998, pp. 3-4.
4. See Compliance and Progress Report dated March 16, 1998, pp. 5-7.
5. The Authority notes that it expects to receive temporary variances from water quality standards for the facilities required by Schedule Six to address CSO discharges into the Charles River, Upper Mystic River and Alewife Brook. DEP has indicated that it will issue further administrative determinations regarding water quality designations for those receiving waters after the variances expire.
6. See Compliance and Progress Reports for September 15, 1997, pp. 8-9 and December 15, 1997, p. 3 for previous reports on the management study.

7. See July 15, 1998, Compliance and Progress Report, pp. 10-12.
8. See Compliance and Progress Report for June 15, 1998, pp. 14 15, for a recent report on beginning construction of other components of this project.
9. See Compliance and Progress Reports for July 17, 1995, pp. 12 14, January 16, 1996, pp. 15-16 and April 15, 1997, pp. 14-16 for previous reports on these programs. The Authority also has worked with the Massachusetts Dental Society to provide education and encourage voluntary practices by dentists to reduce mercury discharges. See Compliance and Progress Reports for July 15, 1997, pp. 12-14 and February 13, 1998, pp. 14-16.