

UNITED STATES DISTRICT COURT

for the

DISTRICT OF MASSACHUSETTS

UNITED STATES OF AMERICA,

&

CIVIL ACTION

No. 85-0489-MA

METROPOLITAN DISTRICT COMMISSION,

et al.,

Defendants.

CONSERVATION LAW FOUNDATION OF

NEW ENGLAND, INC.,

CIVIL ACTION

No. 83-1614-MA

METROPOLITAN DISTRICT COMMISSION,

MWRA QUARTERLY COMPLIANCE AND

PROGRESS REPORT AS OF MARCH 15, 2001

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from December 15, 2000 to March 15, 2001 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 January 2001 and February 2001 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. Report on Dorchester Brook Conduit.

In accordance with Schedule Six, the Authority submitted its *Report on Re-Assessment of CSO Activation Frequency and Volume to Dorchester Brook Conduit and Outfall BOS086* on January 31, 2001 to the Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("DEP").<sup>1</sup> The report presents the results of additional flow

metering and system hydraulic modeling to evaluate combined sewer overflow ("CSO") discharge activations and volumes to the Dorchester Brook Conduit. The results include an updated estimate of total annual volume of CSO to the Dorchester Brook Conduit that is slightly lower than predicted in the 1997 Final CSO Facilities Plan, while the new estimate of frequency of discharge is slightly greater.

The current analysis indicates that the increase in activation frequency is associated with low-volume discharge events. This condition suggests that system optimization projects ("SOPs"), such as adjustment to weir elevations, may be effective in reducing the number of discharges. The Authority has begun to conduct SOP evaluations and is investigating where additional depth or flow data may be helpful, both in the short-term and for possible long-term tracking. The Authority expects that it will complete these additional evaluations this spring and meet with EPA and DEP thereafter to discuss the results.

## 2. Combined Sewer Overflow Annual Report.

In compliance with Schedule Six, the Authority submitted its "Combined Sewer Overflow Control Plan Annual Progress Report 2000" on February 28, 2001. The Annual Progress Report summarized planning, design and construction progress during 2000, identified issues that have caused delays in completing projects on schedule and listed objectives for 2001. Seven of the 25 CSO projects are complete and eleven more are in construction.

### B. Progress Report.

#### 1. Executive Director.

On March 2, 2001, Douglas B. MacDonald, Executive Director of the Authority, submitted to the Board of Directors his resignation in order to accept an appointment as Secretary of Transportation for the State of Washington. Mr. MacDonald has asked that this report express his appreciation for the engagement and care that the Court has taken in administering its enforcement orders over the long course of the Boston Harbor case. One facet of that effort particularly valued by the Executive Director and Authority Board members and other staff has been the interest in detail, support and encouragement that the Authority has always received from the Court in meeting the many challenges of the Court Schedule Order and its milestones. Mr. MacDonald's last day at the Authority will be March 30, 2001.

#### 2. Harbor Management.

##### (a) Secondary Battery C.

After the Authority achieved substantial completion of Secondary Battery C, Deer Island Treatment Plant ("DITP") staff began wet testing of the Battery.<sup>2</sup> However, in late December 2000, during that testing, DITP staff observed a leak in a portion of a 10 foot by 15 foot, 500-foot long effluent conduit running beneath the secondary cross gallery. The leaky conduit was constructed not as part of the contract for Secondary Battery C but as part of the contract for Secondary Clarifier Batteries A and B. As a

result, the Authority mobilized the construction support contractor to make the necessary repairs. The contractor dewatered and inspected the conduit and injected urethane sealant into suspect joints and surface cracks. This work was completed in late January.

After the injections were completed, DITP staff refilled the conduit with plant effluent to test the repairs. The seepage was greatly diminished, but the secondary cross gallery floor was still wet in several places. The urethane sealant required three weeks of soaking time to "heal" the concrete to the point where the gallery floors were dry.

While the channel was soaking, DITP staff continued to test pumps and valves. Staff discovered a number of return sludge pump failures, which were due to cooling fan failures in the variable frequency drive cabinets. There were also a number of circuit board failures in the same units. The Contractor replaced the fans and circuit boards.

On March 2, DITP staff removed the remaining stop logs from the disinfection end of the effluent channel and, on March 8, the Authority reintroduced primary effluent flows to Secondary Battery C. DITP staff are currently operating Secondary Battery C at approximately 30 million gallons per day ("MGD") and will gradually increase flows up to 170 MGD as the biomass necessary for secondary treatment is cultured.

### 3. Combined Sewer Overflow Program.

#### (a) North Dorchester and Reserved Channel Consolidation Conduits and CSO Facility.

As previously reported, the Authority has been meeting with EPA, DEP, the U.S. Department of Justice ("DOJ"), Boston Water and Sewer Commission ("BWSC"), the Massachusetts Port Authority ("Massport") and South Boston elected officials and community representatives in an effort to move forward with CSO control in South Boston.<sup>3</sup> The Authority has been preparing a draft Notice of Project Change ("NPC") to initiate consideration under the Massachusetts Environmental Policy Act ("MEPA") of alternative sites and approaches for CSO control at the North Dorchester Bay beaches and Reserved Channel, because it was unable to obtain Article 97 legislation necessary to begin construction of the proposed CSO project at Site J. South Boston elected officials opposed locating the CSO facility at Site J and requested that the Authority evaluate moving the facility to a site at Massport's Conley Terminal.

In early February, the Authority circulated a draft NPC to a range of interested parties including the EPA, DEP, DOJ, counsel for community groups, BWSC, the Authority's Advisory Board, Massport and South Boston elected officials and subsequently met with these parties on February 27. At the meeting, discussion focused primarily on the status of, and prospects for, Massport's efforts to purchase the Coastal Fuel property adjacent to Massport's Conley Terminal facility and whether property at Conley Terminal could be made available to the Authority for CSO control purposes. In addition, the group discussed the draft NPC and the proposed reassessment of alternatives for CSO control in South Boston. Based on discussions, it appears as though the group has reached substantial

consensus that filing a NPC and preparing a reassessment is the appropriate way to move forward and reach a consensus on an acceptable approach to CSO control in South Boston. The Authority plans to file the NPC with the MEPA unit in April and anticipates that the reassessment will take approximately 10 months following receipt of the Secretary's Certificate on the NPC.

The reassessment has the following objectives: 1) revisit baseline assumptions on flows, infrastructure and water quality; 2) review Conley Terminal siting alternatives for availability and cost; 3) identify and review other feasible CSO control alternatives; 4) evaluate and compare CSO control alternatives in a broad public forum; 5) develop a consensus on a new recommended plan that can be implemented; and, 6) develop a cost and schedule for plan implementation.

As part of the reassessment, the Authority intends to evaluate a range of technology options. The alternatives identified to date include relocation of the previously recommended plan from Site J to Conley Terminal; sewer separation of either or both Reserved Channel and North Dorchester Bay tributary areas; relief of the South Branch of the South Boston Interceptor; and construction of the North Dorchester Bay conduit in conjunction with a dewatering pump station.

The MEPA review process will be structured, following a public meeting and the receipt of comments on the NPC, in a Secretary's Certificate. The Certificate is anticipated to specify the reports and analyses to be performed, including the evaluation of technology options using a range of criteria, including water quality, technical feasibility, community and environmental considerations, institutional requirements and cost. In addition, the Certificate is expected to provide for opportunities for public review, input and comment at various stages of the process. The Authority expects to present information developed during the reassessment to the public in a form which will allow a comparison between the various alternatives.

The Authority's goal is that the reassessment will result in a new recommended plan for South Boston CSO control that has the support of a broad constituency and that is capable of implementation. However, the Authority recognizes that depending upon the alternative selected and the public review process, additional time may be needed beyond the proposed ten-month period to meet regulatory requirements or "to fully evaluate and respond to public comments received during the MEPA review process and to reach consensus on a recommended plan with all parties."<sup>4</sup>

In the meantime, the Authority plans to meet with Massport staff soon, to identify in the short term, the potential for siting and constructing CSO facilities within Conley Terminal. The results of these discussions will be incorporated into the MEPA review.

(b) Cambridge Sewer Separation.

As previously reported, during public meetings regarding the proposed filing of a NPC describing the revised Alewife Brook CSO control plan, citizens and elected officials raised concerns relating to wetlands, open space and flooding impacts of the revised plan.<sup>5</sup> In an effort to address

these concerns fully, the Authority and the City of Cambridge delayed the filing of the NPC in order to perform additional investigations. In January, the Authority and the City of Cambridge met with EPA, DEP and DOJ to discuss the issues and to reach a consensus prior to presenting the revised plan publicly through the MEPA process.

The Authority and the City of Cambridge have completed the project evaluations to support preparation and filing of a NPC describing the revised plan, which the Authority now expects to file by mid-April. The Authority also held a final pre-submission public meeting on the revised recommended plan earlier this month. In addition, the Authority is continuing with its public participation program in order to gain a level of consensus and to assist communities, environmental organizations, residents and others to prepare for the formal MEPA public comment period, during April and May. Through these public involvement efforts and additional evaluations, the Authority and Cambridge intend to address the concerns raised by elected officials and citizens regarding the impacts of the revised CSO plan. At this time, the Authority expects that the public comment period on the NPC will last 30 days and the Secretary of Environmental Affairs will issue a certificate by early June.

In the meantime, Cambridge continues design and construction efforts to separate sewers in areas tributary to CAM 004.

(c) Floatables Control and Outfall Closing Projects.

In February 2001, the Authority submitted its technical memorandum on *Re-assessing Long Term Floatables Control for Outfalls MWR018, 019, and 020* to EPA and DEP. The technical memorandum recommends an alternative to the 1997 CSO Facilities Plan recommendation of installing underflow baffles within seven CSO regulators upstream in the Old Stony Brook System. The recommended alternative is to raise the overflow weir elevations at the MWR 018, 019 and 020 outfalls and modify the operational procedures of the Prison Point CSO facility to eliminate these overflows to the Charles River Basin in a typical rainfall year. The Authority also proposes to install and maintain a level monitoring system in the Boston Marginal Conduit, upstream and downstream of the MWR 018, 019 and 020 outfalls. Although the Authority has not received approval from EPA and DEP on this recommendation for long-term floatables control at these locations, the Authority has begun implementing the proposed modifications and expects to report on their effectiveness at the end of June 2001.

In addition, the Authority recently completed recalibrating its hydraulic model in the vicinity of MWR 010 based on 1998 meter data and field inspections. Preliminary modeling results indicate that this outfall is not active during a typical rainfall year. A technical memorandum presenting the results of these evaluations is currently being prepared and will be submitted to EPA and DEP in April.

(d). Cottage Farm and Prison Point CSO Facility Upgrades.

As previously reported, the Authority has been implementing changes at the Cottage Farm and Prison Point CSO Facilities to correct problems associated with the automatic sampling systems and flow meters which it discovered during testing.<sup>6</sup> At the Cottage Farm facility, staff are currently

finalizing work on the sample pumps and chlorine analyzers, and at the Prison Point facility the contractor is reprogramming the control logic for the automated system. The Authority expects to complete work at both facilities by the end of March, after which it will perform acceptance testing during two wet-weather activations. Acceptance testing will be followed by a period of startup.<sup>7</sup>

(e) Somerville Marginal, Commercial Point and Fox Point CSO Facility Upgrades.

As previously reported, the Authority had anticipated that it would be able to meet the March milestone for completion of construction of the Somerville Marginal, Commercial Point and Fox Point CSO Facility Upgrades.<sup>8</sup> The Authority now estimates that the contractor will not complete construction until May 2001. The contractor is still in the process of completing the change order work added as a result of problems discovered at the Cottage Farm and Prison Point Facilities during testing of the upgrades.

At the Somerville Marginal Facility, the contractor has completed installing the chlorination and dechlorination pumping systems, the chemical diffusers, sample pumps and flow controls. The contractor is now in the process of transferring sodium hypochlorite from the existing storage tanks to the new storage tanks. In addition, telephone data lines are expected to be installed by the end of March at all three facilities to allow the contractor to test the instrumentation systems.

At the Commercial Point Facility, the contractor has completed the chlorination and dechlorination pumps, but has been prevented from installing chemical diffusers, sample pumps and low level flow instrumentation in the flow channels because of high water levels in the outfall pipe due to tidal effects. Leaking sluice gates presently prevent the overflow channel from being dewatered. The Authority has issued a change order to allow the contractor to complete this work.

At the Fox Point Facility, the contractor has completed installing the chlorination and dechlorination pumps, the sodium bisulfite diffuser and sample pump. However, the contractor has been unable to install the sodium hypochlorite diffuser, sample pump, and low level flow instrumentation for reasons similar to those delaying the work at Commercial Point, mentioned above. This work will also be performed under the change order referenced above.

The Authority expects that the contractor will be able to complete equipment start-up and check out of the instrumentation systems and begin training Authority staff by May. Once the contractor completes its work, the Authority will perform acceptance testing during two wet-weather activations. If the acceptance testing is successful, a period of start-up will follow. (See Note 7.)

(f) Charles River Variance.

;The term of the Variance issued to the Authority under the Massachusetts Surface Water Quality Standards for CSO discharges to the Charles River

currently extends to October 1, 2001.<sup>9</sup> At the time the Variance term was extended, the completion dates for certain activities required by the Variance were also extended. Specifically, the extension included a report evaluating additional CSO control measures at the Cottage Farm CSO facility.

One of the significant reasons for the overall variance extensions was delays in the United States Geological Survey ("USGS") study of the lower Charles River Basin and the need to incorporate the data and modeling work to be completed by USGS into the work efforts to be completed by the Authority. Following the extensions, the Authority indicated to the regulatory agencies that it would need to receive the information from USGS no later than December 2000 for the Authority to complete the Cottage Farm evaluations by the new July 2001 date. The Authority<sup>0</sup>s expects to receive this information tomorrow. Following its review of the information, the Authority plans to meet with EPA and DEP to discuss the need to extend completion dates for certain activities required by the Variance, including the report evaluating additional CSO control at the Cottage Farm CSO facility.

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Dated: March 15, 2001

**Notes:**

1. The In-Line Storage Project at Dorchester Brook Conduit was not included in the Authority's 1997 Final CSO Facilities Plan because it was assumed that "future planned conditions" at the Deer Island Treatment Plant would bring the Dorchester Brook Conduit overflows into compliance with the state water quality standard [SB (cso)] for Fort Point Channel. However, the project milestones remain part of Schedule Six until the Authority can demonstrate to EPA and DEP that the overflow events at CSOs associated with the Dorchester Brook Conduit are within the level predicted in the 1997 Final CSO Facilities Plan.

2. See Compliance and Progress Report dated December 15, 2000, p. 2.

3. See the Combined Sewer Overflow Control Plan Annual Progress Report 2000, pp. 12-14, and Compliance and Progress Reports dated November 15, 2000, pp. 2-3 and December 15, 2000, pp. 3-4.

4. Upon completion of the reassessment, the Authority expects, following discussions with the Court parties, to request an appropriate revision of the Court schedule.

5. See Compliance and Progress Report dated December 15, 2000, pp. 4-5 and Combined Sewer Overflow Control Plan Annual Progress Report 2000, pp. 27-29.

6. See Compliance and Progress Reports dated September 15, 2000, pp. 7-8 and November 15, 2000, pp. 6-7.

7. Footnote 35 of Schedule Six provides that "(c)ompletion 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".

8. See Combined Sewer Overflow Control Plan Annual Progress Report 2000, pp. 21-22.

9. On July 28, 2000, DEP extended the term of the October 1, 1998 Variance an additional year to October 1, 2001. See Compliance and Progress Report dated August 15, 2000, pp. 9-10.