

UNITED STATES DISTRICT COURT
for the
DISTRICT OF MASSACHUSETTS

.....
UNITED STATES OF AMERICA,

Plaintiff,

v.

METROPOLITAN DISTRICT COMMISSION,
et al.,

Defendants.
.....

CIVIL ACTION
No. 85-0489-RGS

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

Plaintiff,

v.

METROPOLITAN DISTRICT COMMISSION,

Defendants.
.....

CIVIL ACTION
No. 83-1614-RGS

MWRA QUARTERLY COMPLIANCE AND
PROGRESS REPORT AS OF DECEMBER 14, 2012

The Massachusetts Water Resources Authority (the "Authority") submits the following quarterly compliance report for the period from September 15, 2012 to December 14, 2012 and supplementary compliance information in accordance with the Court's order of December 23, 1985 and subsequent orders of the Court.

I. Schedule Seven.

Schedule Seven activity for the month of September 2012 on the Court's Schedule Seven, certified by Frederick A. Laskey, Executive Director of the Authority, is attached hereto as Exhibit "A."

A. Activities Completed.

1. Commence Construction of CAM004 Sewer Separation.

On September 29, 2012, the City of Cambridge issued the notice to proceed with the first of three construction contracts to complete the CAM004 sewer separation project, in compliance with Schedule Seven. Cambridge Contract 8A ("Huron A"), with an award amount of \$15.4 million, includes the installation of approximately 13,150 linear feet of sanitary sewer and storm drain up to 54-inch in diameter in Huron Avenue and several intersecting streets and 7,200 feet of smaller drain pipe for building, catch basin and other connections in a 68-acre area immediately east of Fresh Pond Parkway, from Fresh Pond to Brattle Street. The contract also includes the installation of three large storm drain vaults on Vassal Lane, 45 new or replacement catch basins with hoods and 6-foot sumps, and the removal of stormwater inflow from existing lateral sewer connections, as well as 6,700 linear feet of replacement water main ranging from 6-inch to 12-inch diameter.

Cambridge has also included "Green Technologies" in the contract for stormwater quality improvement and quantity control. The Green Technologies consist of 8,500 linear feet of porous pavement, six "biobasins" with overflow connections to the storm drain system, and 145 new street trees.

The biobasins are planted areas that function as part of the stormwater system by intercepting and detaining street runoff to capture some of the sediments, provide a level of removal of other pollutants such as phosphorus and nitrogen, and potentially reduce the rate and volume of stormwater runoff to the drainage system.

Since commencing work at the end of September, the contractor has conducted pre-construction surveys, pruned trees, installed tree protections, excavated test pits, and replaced lead water services. The contractor has also completed water main relocation at Hawthorne Park and Lexington Avenue. Separately, NStar Gas is installing new gas mains and service connections within the contract area to remove conflicts between its utility infrastructure and the planned sewer and storm drain work. The sewer separation work of Contract 8A is scheduled to be substantially complete by May 2014, and surface restoration work will continue through December 2014.

B. Progress Report.

1. Combined Sewer Overflow Program.

a. Brookline Sewer Separation.

The Town of Brookline is nearing attainment of substantial completion of construction for the \$26 million Brookline sewer separation project. Brookline completed the first of its two sewer separation construction contracts (Phase I) in January 2010, and its \$16.6 million second contract (Phase II) is approximately 91 percent complete. Phase II includes the installation of 3,790 linear feet of storm drain and 1,290 linear feet of sanitary sewer by open trench

method and 4,550 linear feet of sanitary sewer by micro-tunneling.

The contract also includes several large, special structures that will connect the new town sewers to existing Brookline lateral sewers and to the Authority's interceptor system.

In the past quarter, Brookline's contractor for Phase II has completed the installation of main line storm drains and sewers and the connections to them of the storm drains and sewers serving lateral streets. Sanitary connections between the new main line Brookline sewers and the Authority's existing interceptor system, which involved the construction of special juncture structures, are also complete. The contractor's ongoing work includes the installation of building service connections to appropriate new sewers on St. Mary's Street, the cleaning of combined sewers that have been converted to storm drains, and the location and removal of illicit connections.

The remaining construction activities include the installation of a new service connection for a Boston University building, modifications to the existing CSO regulator to allow Outfall MWR010 to convey the separated stormwater to the Charles River Basin, and surface restoration. Brookline expects to attain substantial completion of the sewer separation work by early next year, well ahead of the July 2013 milestone in Schedule Seven.

As previously reported, the Authority attained substantial completion of the contract for the removal of sediments from its Outfall MWR010 in August 2012. This work was necessary to ensure that the outfall has adequate hydraulic capacity to convey Brookline's separated stormwater to the Charles

River Basin, along with smaller volumes of existing Boston Water and Sewer Commission ("BWSC") and Boston University stormwater and infrequent CSO discharges from the Authority's Charles River Valley Sewer and local BWSC combined sewers.

b. Reserved Channel Sewer Separation.

BWSC continues to make design and construction progress on the nine planned contracts for the \$64.3 million Reserved Channel sewer separation project and issued notice to proceed with construction of the last of the major sewer separation contracts in October. BWSC previously completed the \$4.0 million Contract 1 that rehabilitated all four BWSC CSO outfalls that discharge to the Reserved Channel in part to provide long-term reliability and adequate capacity to carry the separated stormwater flows, the \$6.9 million Contract 2 that separated the combined sewers in the area tributary to outfall BOS080, and the \$1.2 million Contract 7, the first of two sequential pavement restoration contracts.

BWSC issued the notice to proceed with construction of the \$9.1 million Contract 4 (including \$7.3 million of work that is eligible for Authority funding) on October 1, 2012. Contract 4 is the last of the major Reserved Channel sewer separation contracts and involves sewer separation in two areas totaling 182 acres tributary to outfalls BOS076, BOS078 and BOS079. One of the two areas lies south of the Reserved Channel and is approximately bounded by G Street, East Third Street, N Street, Emerson Street and East Fourth Street. The second area lies west of the Reserved Channel, close to the Boston

Convention and Exposition Center ("BCEC"), and is approximately bounded by the Reserved Channel, West Broadway, G Street and the BCEC. Contract 4 has a completion date of August 2015. Construction activities to date include installation of water mains and storm drains on West First and C Streets.

During the past quarter, BWSC also attained substantial completion of the \$9.9 million Contract 3A, which involved sewer separation in a 33-acre area tributary to outfall BOS076 bounded approximately by West First Street, G Street, West Broadway and E Street. Under Contract 3A, BWSC installed 9,000 linear feet of storm drain, 3,375 linear feet of sanitary sewer, 8,650 linear feet of replacement water main to avoid conflicts with the planned storm drains, and 22 new storm drain catch basins and reconnected 76 existing catch basins from the existing sewer system to the new storm drains.

The \$10.9 million Contract 3B, which involves sewer separation in two areas tributary to outfalls BOS078 and BOS079 totaling 66 acres, is now 45 percent complete. One area is bounded by East First Street, N Street, East Third Street and Dorchester Street, and the other area includes Elkins Street and Summer Street to the edge of the Reserved Channel. Under Contract 3B BWSC is installing 10,730 linear feet of storm drain, 4,240 linear feet of sanitary sewer, 10,900 linear feet of replacement water main to remove conflicts with the planned storm drains, and 14 new storm drain catch basins and is reconnecting 120 existing catch basins from the existing sewer system to the new storm drains.

Contract 3B construction activities focused on installation of water lines and storm drains in East Third Street. The work in East Third Street is extensive and will take several months to complete. BWSC expects to attain substantial completion of Contract 3B in December 2014.

In addition, BWSC also issued the notice to proceed with the \$6.8 million Contract 8 on October 1, 2012. Contract 8 is the second of two pavement restoration contracts that follow the work of the various sewer separation contracts as sections of work are completed.

BWSC is also making progress with the design of the remaining contracts: Contract 5 (existing sewer cleaning and lining) and Contract 6 (downspout disconnections), both scheduled to commence in 2013. BWSC continues to expect to complete all work for the Reserved Channel sewer separation project by December 2015, in compliance with Schedule Seven.

- c. Control Gate and Floatables Control at Outfall MWR003 and MWRA Rindge Avenue Siphon Relief and Interceptor Connection Relief and Floatables Control at Outfall SOM01A.

The Authority continues to make progress with design of the control gate and floatables control at Outfall MWR003 and Rindge Avenue Siphon relief project and the interceptor connection relief and floatables control at outfall SOM01A project, together estimated to cost \$4.1 million. These projects are the last two of the six projects that comprise the Alewife Brook CSO plan and the last two of the 35 projects in the Authority's region-wide long-term CSO control plan to proceed to design. As recommended in the Authority's Notice of Project Change for the Long Term CSO Control Plan for Alewife Brook

(April 2001), the projects involve ensuring sufficient overflow hydraulic capacity at Outfall MWR003 in extreme storms, including the hydraulic capacity of the Rindge Avenue Siphon, which delivers overflows to the outfall, and increasing the size of the local sewer connection to the Authority's interceptor system at outfall SOM01A. The projects also include the installation of floatables controls at the two outfalls.

The Authority recently received the final preliminary design report for the SOM01A improvements (the "SOM01A PDR"), which confirms the recommendations presented in the April 2001 Notice of Project Change for the Long Term CSO Control Plan for the Alewife Brook, those being enlargement of the connection between the City of Somerville's Tannery Brook Conduit (the "TBC") and the Authority's Alewife Brook interceptor and the installation of an underflow baffle in the TBC between this connection and the TBC's overflow outfall to Alewife Brook (Outfall SOM01A).

The SOM01A PDR specifically recommends that the connection be enlarged from its existing size of approximately 24 inches diameter to 36 inches diameter. This specific recommendation will be refined as the Authority's engineering consultant continues with the ongoing modeling of design alternatives at the MWR003 and Rindge Avenue Siphon and better understands the potential for interrelated hydraulic effects. The Authority recently authorized its consultant to begin to develop construction contract documents to ensure commencement of construction at SOM01A by September 2013, in compliance with Schedule Seven.

The Authority's consultant commenced hydraulic modeling of design alternatives for extreme storm capacity enhancement of the Rindge Avenue siphon and Outfall MWR003 in November. Based on the current schedule for the design work, the Authority expects to report the results of this modeling as well as the recommended final design improvements at both project sites next quarter.

The design work remains on schedule for commencement of the construction contracts for the control gate and floatables control at outfall MWR003 and Rindge Avenue Siphon relief project and the interceptor connection relief and floatables control at outfall SOM01A project by August 2014 and September 2013, respectively, in compliance with Schedule Seven.

d. CAM004 Sewer Separation.

The City of Cambridge recently informed the Authority of significant cost increases and schedule compliance hurdles it has identified as it continues with the design of the two remaining contracts necessary to complete the CAM004 sewer separation project: Contract 8B ("Huron B") and Contract 9 ("Concord Avenue"). Contract 8B involves the construction of new sanitary sewers and storm drains in Huron Avenue and several intersecting streets to separate combined sewers in an 83-acre area adjacent to the Contract 8A work area and extending as far east and north as Concord Avenue and as far south as Brattle Street. Contract 9 involves the construction of new sanitary sewers and storm drains in Concord Avenue and several intersecting streets to separate combined sewers in a 60-acre area north of Contracts 8A and 8B and

extending from Fresh Pond Parkway in the west to the intersection of Concord Avenue and Huron Avenue in the east.

Cambridge received the 60-percent design submission for Contract 8B from its engineering consultant this month and is preparing contract services to commence final design of Contract 9 in January 2013. Cambridge's field investigations to support Contract 9 design are already underway. With the completion of design and commencement of construction of Contract 8A and its progress with the design of Contract 8B and the field investigations for Contract 9, Cambridge has identified additional engineering and construction requirements to achieve sewer separation in the Huron Avenue and Concord Avenue areas and has evaluated their effects on construction cost, level of necessary construction activity and schedule.

On October 17, 2012, Cambridge notified the Authority that it will have some difficulty completing construction of the last of three CAM004 sewer separation contracts (Contract 9) in accordance with the December 2015 Schedule Seven milestone for completion of the CAM004 sewer separation project. In addition, Cambridge informed the Authority that its updated cost estimates indicate that the cost of the CAM004 sewer separation work eligible for Authority funding is \$30 million higher than Cambridge's previous estimated cost.

In response, the Authority immediately requested additional schedule and cost information and met with Cambridge on October 31, 2012. Cambridge stated that a primary concern in its construction planning is

construction impacts to Huron Avenue and Concord Avenue traffic, and its avoidance of cumulative impacts to traffic along both of these primary transportation routes carrying traffic from central Cambridge to Fresh Pond Parkway, Alewife Brook Parkway and points west. It is for these reasons that Cambridge proposed to push out by more than a year the start of Contract 9 to avoid any overlap of work along Concord Avenue with the Contract 8B work along Huron Avenue.

After hearing Cambridge's presentation, the Authority directed Cambridge to identify and evaluate any available means to mitigate potential delays, including accelerating the commencement of design of Contract 9 to the earliest possible date (January 2013) and updating its assessment of the amount of work within contracts 8B and 9 based on the 60-percent design and cost submission for Contract 8B, which Cambridge received at the end of November 2012. The Authority also requested that Cambridge evaluate construction sequencing approaches that might allow for acceleration of Contract 9, simultaneous construction activities with Contract 8B, and a greater number of simultaneous construction crews.

At a December 5, 2012 follow-up meeting requested by the Authority, Cambridge stated that it would target completion of all work by the December 2015 milestone and would accelerate its efforts in four key areas driving the schedule for completion, including the earliest start of design of Contract 9; the sequencing, coordination and management of multiple construction contracts and crews, as well as private utility work; the phasing and sequencing of work

to manage sewer and storm drain flows during construction; and the management of impacts to traffic, homes, businesses and schools.

Cambridge presented updated information on construction requirements, utility relocations, scheduling and cost it had obtained from the recent 60-percent design submission and an update of the projected cost and schedule requirements for Contract 9. Based on this information, Cambridge expects to be able to commence Contract 8B by July 2013 and complete the sewer separation work of the contract by December 2015. Cambridge also agreed to commence design of Contract 9 in January 2013, one year earlier than it proposed to the Authority in October, and has already taken contract procurement steps that affirm this new schedule. Cambridge is also evaluating how it can shorten the Contract 9 design duration and commence construction by January 2014, 20 months earlier than it proposed in October.

Cambridge also presented a "revised preliminary schedule" for construction of Contract 9 showing completion of the sewer separation work and related closing of Outfall CAM004 by December 2015, in compliance with Schedule Seven. This preliminary schedule requires a complete overlap of the construction activities of Contract 9 with Contract 8B, as opposed to commencing the Contract 9 work only after substantially completing Contract 8B, which the City had proposed in October. Cambridge indicated at the December 5 meeting that this schedule and the December 2015 court milestone is contingent upon a number of design, construction and construction impact mitigation considerations that Cambridge asserts need to

be fully evaluated and resolved as it makes design progress with contracts 8B and 9, coordinates the planned work with private utilities and further evaluates the sequencing of construction activities of the two contracts.

In addition, Cambridge presented updated information regarding the cost of the sewer separation work. Cambridge's updated cost estimates indicate that the cost of the sewer separation work eligible for Authority funding may be \$30 million more than the previous Cambridge estimate of \$58 million in the Authority's Capital Improvement Program budget. This magnitude of increase, if ultimately accepted by the Authority, will have a meaningful impact on the Authority's capital spending plans for wastewater and water projects.

Cambridge also estimates that its own cost share and cost of work not eligible for Authority funding in the Alewife Brook sewer separation related contracts, such as roadway, lighting and water line improvements and utility work on private property, could total nearly \$90 million.

The Authority and Cambridge are committed to working together to meet the December 2015 milestone for completion of the CAM004 sewer separation. Notwithstanding the efforts Cambridge is taking to attempt to maintain compliance with the milestone, there remains considerable schedule risk as Cambridge continues to make progress with its design and construction efforts. Furthermore, Cambridge emphasizes that the revised preliminary schedule of work is extremely tight and will continue to carry risks associated with the complexity and high level of construction activities and traffic management, continuing coordination with and dependence upon the work of private

utilities, and unforeseen subsurface conditions in this highly developed and congested part of Cambridge.

e. CAM004 Stormwater Outfall and Detention Basin.

The City of Cambridge continues to make progress with construction of the CAM004 stormwater outfall and wetland basin ("Contract 12"), which is now approximately 85 percent complete. During the past quarter, Cambridge's contractor has completed excavation and grading of the main basin and vegetative plantings. Management of invasive plant growth on newly constructed berms by hand-pulling is ongoing. The contractor continues with the installation of the pedestrian overlook at the Oxbow area and construction of the boardwalks across the basin area and the grading of the multi-use path running along the south side of the basin that is part of the Massachusetts Highway Department's new bikeway.

The contractor has also completed installing all sections of the stormwater outfall conduit except for the section along Wheeler Street, which is now delayed and carries risk for compliance with the April 2013 completion milestone in Schedule Seven. At the meeting on December 5, 2012, Cambridge continued to advise the Authority of the risk of delay in completing the Contract 12 work due to the slow progress of private utility relocation work by Verizon.

Cambridge has been corresponding and coordinating with Verizon about the critical impact of the utility work on the progress of its court-mandated project for more than two years. Although Verizon has commenced the utility

relocation work, Cambridge reports that Verizon has made little real progress over the past several months and has been unable, despite multiple correspondences with Verizon and conversations with the Verizon project manager, to obtain a schedule for completing the work from Verizon. Cambridge reports that it has been told by Verizon several times over many months that the utility relocation work can be completed within a month. Because the remaining stormwater conduit installation by Cambridge's contractor will take four months, if Verizon does not complete its work by the end of this year, Cambridge expects a day-for-day delay in attaining substantial completion of this project.

Upon hearing the difficulties encountered by Cambridge, the Authority promptly contacted Verizon directly and facilitated a meeting at the Authority's headquarters in Charlestown on December 11, 2012 which included senior representatives of Verizon, the City of Cambridge and the Authority. At the meeting, the Authority reviewed the critical nature of compliance with the court order, and Verizon and Cambridge reviewed their respective construction needs and schedules for the remaining work on Wheeler Street. Cambridge cannot proceed with the construction of the conduit until a line of poles carrying overhead lines along Wheeler Street is removed, and Verizon cannot remove the poles until all data service connections are relocated to a new trunk line which Verizon has already installed on the opposite side of the street.

Verizon explained the practical difficulties of accomplishing the "cut-over" to the new lines, the final stage of the utility relocation work. These

difficulties include the necessity for obtaining signed “releases” from business customers in this heavily commercial and retail district where continuity of telecommunications services is especially critical. Unlike repairs to electrical lines and circuits, Verizon explained that it is prohibited from unilaterally scheduling the interruption of service to any customer, and therefore cannot simply dictate the date and duration of the “cut-over” of service, but must accommodate the reasonable needs of those customers.

At the meeting, the Authority asked and received an acknowledgement that Verizon staff and management at the highest levels were aware of the importance of the project, and received a commitment that Verizon would actively devote all possible resources to the completion of its work. Verizon has committed to a target date of no later than January 15, 2013 for completing the utility relocation work and will make every effort to accelerate that schedule if feasible. The Verizon, Cambridge and Authority representatives also agreed to meet at the project site on Thursday, December 13, to review coordination issues between Verizon’s work and that of Cambridge’s contractor to determine whether any portions of the remaining work might proceed in tandem or in sequential steps.

As of the date of this report, even if Cambridge is able to commence its work on Wheeler Street on January 15, 2013 it believes it cannot complete the work until the middle of May, approximately two weeks beyond the April 30, 2013 milestone. In an attempt to meet the deadline, Cambridge has committed

to investigate with its contractor all possible avenues for expediting the work, including twelve-hour shifts and Saturday work.

f. South Dorchester Bay Inflow Removal

As previously reported, BWSC continues to investigate alternatives for removing additional stormwater inflow from its Dorchester Interceptor or otherwise relieving hydraulic conditions in the interceptor during extreme storms following the closing of its CSO regulators with completion of the South Dorchester Bay sewer separation project in 2007. BWSC has conducted flow metering and additional hydraulic modeling and system analysis to evaluate system performance in extreme storms to determine preferred hydraulic relief solutions if warranted. BWSC plans to issue an interim report on the results of this analysis in early 2013 and a final report with recommendations by spring 2013.

Flow monitoring and field investigations performed under the Dorchester Interceptor Inflow Relief Project have detected numerous locations of stormwater inflow into sanitary sewers. The majority of these sources involve catch basin laterals. BWSC crews are currently sealing those locations that can be eliminated by trenchless methods. BWSC also expects to advertise an initial construction contract in 2013 for the relocation of seventeen catch basin connections from the sanitary sewer system to an existing storm drain.

Respectfully submitted,

/s/ John M. Stevens
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CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of this document, which was filed via the Court's ECF system, will be sent electronically by the ECF system to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non-registered participants on December 14, 2012.

/s/ John M. Stevens
John M. Stevens (BBO No. 480140)
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Dated: December 14, 2012

EXHIBIT A

SCHEDULE SEVEN

MWRA MONTHLY COMPLIANCE REPORT

September, 2012

EXHIBIT "A"

**NEW BOSTON HARBOR
SECONDARY
TREATMENT PLANT**

MONTH/YEAR

CSO CONTROL

**LONG-TERM
SLUDGE MANAGEMENT**

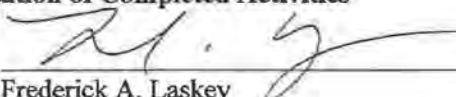
September 2012

MWRA, in cooperation with Cambridge, to commence construction of CAM004 sewer separation.²⁶

(Completed – See December 14, 2012 Compliance and Progress Report.)

Certification of Completed Activities

By:



Frederick A. Laskey
Executive Director, MWRA

Date: December 14, 2012