

# A Perspective: The Boston Harbor Project

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*Even though the extraordinary efforts of many people are now being applied to the problem of cleaning up Boston Harbor, there are many more challenges to meet in the future.*

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**T**he task to clean up Boston Harbor is more than well underway. The new sewage treatment facilities for Boston Harbor are fast approaching completion. Deer Island was chosen in 1985 as the site of the new plant in one of the earliest formal decisions of the new Massachusetts Water Resources Authority (MWRA) Board of Directors, which had been created by the Commonwealth of Massachusetts in part to address the problem of insufficient water quality in Boston Harbor and ensure compliance with a federal court decree in that regard.

Early efforts to develop planning and construction schedules that were in accordance with that federal court decree had been completed by the MWRA by 1986. Facilities planning work began in earnest in 1986 and, within

the shortest practicable time, early design work and site preparation began on the project site. By the end of 1991, with the timely completion of the new MWRA sludge pelletizing facility at Fore River in Quincy, sludge discharges to Boston Harbor were permanently ended.

Today, the first new treatment facilities — primary treatment facilities for MWRA North System flows — are nearing operational status. Deer Island, in the meantime, has been transformed. Now, as has been the case for many months, the intense construction activities on the island are bringing ever closer to achievement the ultimate goal of a modern sewage treatment system for the 43 communities and two million people in the MWRA service area.

## Documenting the Work

The following six papers in this volume are a welcome addition to the literature on the Boston Harbor Project. They treat matters of intense public and professional interest and they contain material that cannot be found elsewhere in such a convenient form and thoroughly organized manner. It is also especially noteworthy that these papers are practice-oriented and are first-hand accounts by participants active in the project's design and construction.

The Boston Harbor Project is moving forward as a result of a political process that is

now in its fourth decade. This process has undertaken to solve intricate institutional problems:

- What facilities should be built?
- Where should they be sited?
- How should they be related to the complex issues involved in setting environmental standards?
- What kind of arrangements within, and among, the operating and regulatory government agencies (to say nothing of all the interested citizen constituencies) should guide the course of the project?

These questions are addressed in "The History & Planning of the Boston Harbor Project."

The two papers that provide an entirely engineer-oriented focus — "The New Boston Outfall" and "The Design of the Deer Island Treatment Plant" — summarize the key civil engineering considerations embodied in the design of the new Deer Island facilities.

The building of any new facility includes related (but distinct) challenges. "Managing the Boston Harbor Project" aptly depicts these construction challenges.

"Financing the Boston Harbor Project" moves out of the realm of engineers and planners to discuss the critical task of persuading lenders in the public capital markets to invest in the project on the strength of the MWRA's future ability to repay principal and interest from the steeply increased level of assessments to participating cities and towns.

Finally, "Combined Sewer Overflow Abatement in Boston Harbor" examines the next set of planning issues that must be resolved so the region's continuing commitment to meet water quality goals can be maintained.

In all these papers there only remains (for another author, another day) a deeper examination of the special role played by Federal District Court Judge A. David Mazzone, who was exercising enforcement powers under the Clean Water Act, in achieving the progress the project has accomplished since 1985.

## Looking to the Future

Hundreds, possibly thousands, of people have been key players in contributing talent, energy,

will and resources to the rebuilding of Boston's neglected wastewater infrastructure. The project could never have advanced even a fraction if it were not for the good fortune that so many people would be devoted to its realization. As new sewage treatment facilities come on line, the community as a whole — engineers, policymakers and public administrators, and, first and foremost, citizens carrying a myriad of concerns for the environment, for the quality of life in their own communities, and for a sound program of public expenditure — can take credit for the project's success.

The inexcusable daily assault on the marine environment in and near Boston Harbor resulting from inadequate attention to the sewage system is approaching an end. However, there's more to be done. Those who have participated in bringing about the new Deer Island treatment plant have come to appreciate the complexity of modernizing the sewage system. While great strides have been taken toward restoring Boston Harbor, more work awaits:

- Achieving a financing structure for the remainder of the project that assures affordable water and sewer rates for home owners and businesses;
- Harmonizing the environmental protection and public health benefits of sewage treatment with the critical need for water infrastructure rehabilitation so that the region's economic growth and vitality can be supported;
- Capturing the potentially enormous long-term cost savings from reducing clear water leakage into the sewer system from infiltration and inflow;
- Modernizing and rehabilitating the pipes and pumps in the MWRA's 43 constituent communities as well as in the MWRA's regional system to ensure that sewage can get to the new plant for treatment;
- Motivating 800,000 households in the service area to reduce disposal of household hazardous wastes to the sewage system;
- Encouraging source reduction and pollution prevention strategies, coupled with effective enforcement, to reduce the discharge of industrial toxins;

- Ensuring that water conservation becomes an ethic so the specter of river diversions for the MWRA water supply remains a distant one;
- Rebuilding the aged water supply system to provide the efficient, reliable delivery of high quality water;
- Implementing cost-effective measures to control combined sewer overflows; and,
- Instilling a knowledge of, and appreciation for, the environment in the next generation of ratepayers through education and outreach programs.



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