



Interviews with Local Government Officials:

Gaining Public Support for Water Infrastructure Costs

Gloucester, Massachusetts

Bruce Tobey, former Mayor and current City Council Member

The City of Gloucester, Massachusetts, is a small coastal community located 25 miles northeast of Boston. It covers 25 square miles and has more than 65 linear miles along the coastline of Massachusetts. It was founded in 1623 as a fishing community but has since diversified its economy. Nearly 80 percent of the town's population lives on an island that constitutes half of the total land area of the city. The island is connected to the mainland by three bridges.

Nearly 150 years ago, Gloucester installed its first sewer system. Until 1984, the collected untreated waste was pumped to the middle of Gloucester Harbor and directly discharged. After the passage of the Clean Water Act in 1977, Gloucester was sued by the U.S. Environmental Protection Agency and the Massachusetts State Department of Environmental Protection for violating the Act by discharging untreated sewage into the harbor. In 1979, the city agreed to a consent decree to settle the lawsuits. The decree obligated the city to:

- Construct a wastewater treatment plant (WWTP) to handle the existing flows of the community;
- Construct collection networks to bring coastal neighborhoods into the central WWTP to eliminate the issue of individual failing septic systems;
- Develop a solution to issues posed by the presence of Combined Sewer Overflows; and
- Construct an extended outfall to Massachusetts Bay (if the city wanted to receive a secondary treatment waiver).

The elected local officials who began implementation of the decree, despite the presence of substantial state and federal grant support for water pollution abatement projects during the 1980s, proceeded cautiously in addressing these obligations, so progress was achieved slowly.

The WWTP was constructed with the aid of state and federal funds and went on line in 1984. Unfortunately, it did not have the **capacity** to deal with the outflows from the numerous fish processing plants throughout the community, so pretreatment was required for these companies. For many of these businesses, pretreating their waste meant significant investments in new pretreatment systems. From 1982-1985, the first round of collection system networks began to be installed along the eastern coast of Gloucester.

In 1987, EPA's pretreatment enforcement initiative began. As Gloucester struggled to implement the consent decree, the pretreatment enforcement initiative added extra pressure to continue construction and to comply with the new rules and regulations.

Throughout the late 1980s, more neighborhoods in northern Gloucester began the planning phase of their collection networks to connect the communities to the city's main sewer system. In order to install pump stations and gravity lines in the first North Gloucester neighborhoods to be sewerred, the community endured dramatic blasting – construction in the area's hilly terrain was complicated by the presence of enormous amounts of subsurface granite. Betterments of \$8,000 on a 20-year repayment schedule were issued for this work in 1992 to affected community members.



During these first installations, 300-400 homes were outfitted with conventional sewer connections. Community resistance to these construction projects was growing, however, because the area's economy had slid into a recession and grant money for these projects had essentially disappeared. Community members began pushing to find an **innovative**, less expensive way to connect outlying communities to the main sewer system.

In 1991, Mr. Tobey was elected as interim mayor of Gloucester. He successfully applied for grant money that the City used to test alternative on-site treatment and disposal technologies. Additionally, alternative centralized sewer collection system approaches that would not require granite excavation were studied. The city prepared an amended facilities plan on a short timeline that incorporated the results of these tests and studies. Gloucester began focusing on installing septic tank

effluent pumps systems (STEP) in place of conventional sewer lines and developed a plan to begin construction.

In 1992, a new mayor was elected and reversed the community's decision to install STEP. Residents objected to the decision to continue installing traditional sewer lines and intervened in the lawsuit that had given rise to the consent decree. Mr. Tobey was returned as mayor in 1994, negotiated an amended consent decree, and received approval for bonding to install STEPs.

The City successfully lobbied to obtain funds from the [Clean Water State Revolving Fund](#) financed at a zero percent interest rate to support this installation. Still, residents understood that they would need to pay \$15,000-\$20,000 betterments. However, installing conventional sewer connection lines would have increased overall costs even more, by as much as 50 percent, due to the extensive blasting and pump station construction a conventional system would have required. By being active participants in the selection of which technology to install, community members were generally very supportive and willing to spend the necessary money to implement STEP.

Before beginning construction, Gloucester evaluated its other infrastructure in the STEP project area as part of a citywide improvement plan. In addition to the sewer work already discussed, the town determined that it needed to replace its water lines. In order to save money, the city converted the old water main into the pressurized sewer main the STEP system required, and then installed new water mains. Costs for this installation were reduced since they were undertaken as part of an ongoing project and were applied to water rates.

To continue to keep betterment costs below \$20,000 per unit for both the last phase of the North Gloucester project as well as for any other future sewer projects, the city created a [betterment stabilization fund](#). It was funded through connection fees charged to new houses tying into the pre-existing sewer mains, as well as from a payment received from the nearby town of Essex when Essex connected its new sewer system to Gloucester's. The payment reflected Essex's pro rata share of Gloucester's cost to develop the system. Additionally, all betterments represented only three-quarters of the total cost of the sewer collection system construction. The last quarter of the cost was paid through the city's General Fund, funded by the collection of real estate taxes and other local fees and assessments. The sewer rate increased annually in order to cover the costs of maintaining this newly upgraded infrastructure, just as water rates increased to support the implementation of the system's capital improvement plan.

The city continued to make other capital improvements according to its capital plan, such as building a new high school and capping old wells. Everything was implemented in a sequential order so that costs were spread out and projects moved step-by-step in conjunction with all other improvements.

In 2002, a new mayor took office and continued to provide leadership on implementing the CIP. He recently agreed to a consent decree to implement a \$60 million combined sewer overflow (CSO) project. It remains to be determined whether the project will be financed by sewer rates or by a special surcharge on the city's real estate property tax rate. As the discussion of this choice proceeds, it is hoped that community members will accept the need for implementing a CSO remediation plan.

Due to the innovative approaches and environmental alternatives Gloucester utilized in implementing these capital improvements, the city is an example for others looking to install [cost-effective, efficient](#) sewer systems and capital improvements. This is especially true for cities with similar geography or other difficulties that complicate installing conventional sewer lines.

Some of the keys to success for Gloucester's projects included:

- [Constant communication between community members, local officials, state officials, and federal officials;](#)
- [Using a variety of cost recovery mechanisms and having a sensible financing plan prior to implementation; and](#)
- [Having a consent decree that pushed the process along.](#)

In addition, by pairing the sewer reconstruction with other capital improvements, citizens could see marked differences after construction was finished. The community understood why the money was being spent and could directly reap the tangible benefits. With community support and constant communication, Gloucester was able to identify the best and most cost-effective capital improvement options and implement them to improve quality of life for the entire community.