

# Southington Points the Way for Building the Water System Your Community Needs

## DOES YOUR COMMUNITY...

- Want to improve the hydraulics and increase the reliability of its water system?
- Have an idea of the water system it wants, but lack a clear roadmap for that way forward?
- Have a rate structure and financial picture that comes up short for delivering the future you'd like to have for the water system?

If you can identify with these points, consider some strategies taken by the Southington Water Department, which recently completed an ambitious multi-year plan for improving the Town's water system.

Intended to improve the water system's hydraulics, this multi-year project included the creation of a new pressure zone to improve water pressure, provide additional storage, and increase system resiliency and redundancy. The work was financed through a low-interest, long-term loan supported by a modest rate increase that was accepted without significant objection from ratepayers.



*Entrance to new 1.0-million-gallon East Side water storage tank site*

The strategy and steps behind Southington's success point the way for other communities that want to provide better water service to their residents, institutions, and commercial customers. The process the Southington Water Department followed included four important steps.

### **1. MASTER PLAN HELPS THE SOUTHINGTON WATER DEPARTMENT UNDERSTAND PRIORITIES**

During 2012 and 2013, the Southington Water Department set out to develop a clear understanding of the status of its water system, and identify needs for system improvements and maintenance over a 20-year planning horizon. A Water System Master Plan was developed that provided a framework for maintaining the Water Department's existing assets while planning for system improvements. Out of that study arose a number of recommendations. One of these was the creation of a new pressure zone, the East

Side Pressure Zone, that would improve system hydraulic reliability, improve system pressures in pressure-deficient areas of the system, and increase available fire flow.

The Master Plan helped set priorities for spending. It also helped with developing a clear idea of how the various components of the project would work together to meet the goal of improved water service for residents, and supported development of a schedule for the multi-year project.

The Master Plan became a critical tool that the Southington Water Department used in later stages of the project to obtain project funding and gain community acceptance of the project.

### **2. RATE STUDY HELPS BUILD THE FINANCIAL SCENARIOS**

After the Southington Water Department came to a clear understanding of what work needed to be done, the next step was to develop a sensible approach to fund the entire project. This involved a rate study that included identifying water rates

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being charged by nearby municipalities, evaluating Southington Water Department's current rate structure, and determining the ability and likelihood of residents to support an increase in rates, if needed. The rate study included analysis of several possible project scenarios, to help identify what was financially feasible for the community.

### 3. LOW-INTEREST LOAN PROGRAM AND MODEST RATE INCREASE FUND PROJECT

The information in the Water System Master Plan and the rate study supported the search for finance in two ways.

**A low-interest, long-term loan:** Of course, water infrastructure projects require significant work and expense in their early stages and during construction, but the revenue to pay for the work is spread out over time. External funding – either a loan or a grant – would allow all aspects of the project to advance.

Accordingly, the Southington Water Department sought financial support for the project, and found it through the Drinking Water State Revolving Fund (DWSRF) Program, administered through the Connecticut Department of Public Health (DPH). The DWSRF Program is part of a federal program designed to help municipalities that need to fund capital drinking water infrastructure projects.

Applying for the loan involved demonstrating the community benefits of the project. The main drivers included showing how the planned improvements would help with system resiliency and redundancy, provide needed storage capacity, and correct pressure deficiencies within the system.

DWSRF applications include a point rating system. They consider factors such as the project's technical merits and the expected community benefits. They also consider whether the planned work will fix serious system deficiencies in water quality or quantity, or whether the improvement will increase system resiliency, security, or sustainability.



*Preparations for blasting of the ledge along the proposed water main route*

**A modest rate increase:** A modest rate increase was needed from customers to support the DWSRF loan and to maintain capital reserves for other needed projects – such as replacing aged water mains. But what some municipal officials were concerned about didn't happen – there was no significant pushback to the proposed rate increase.

One reason for such broad community acceptance was the information derived from the Master Plan and rate study, which helped build a logical case for the rate increase. Southington Water Department officials were able to describe

in concrete terms the work required, how much it would cost, and the expected benefits to the community. Once residents were aware of how the money would be used – to support better water service for them – they were more inclined to accept the rate increase.

### 4. CLEAR PLAN HELPS MAINTAIN COMMUNITYWIDE SUPPORT

In 2015, Tighe & Bond designed the East Side Pressure Zone project. This included a new booster pump station, a 1-million-gallon water storage tank, and approximately 1,500 feet of water

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The new East Side Pump Station is set into place in Southington

transmission main to connect the new storage tank to the system.

The project was separated into three contracts that were awarded in April of 2016. The water transmission main was constructed by Baltazar Contractors, Inc. of Ludlow, MA, which completed the work in August of 2016. The pump station and water storage tank projects were completed in the Fall of 2017 by D'Amato Construction of Bristol, CT, and DN Tanks, of Wakefield, MA, respectively. The total combined construction cost for these projects was \$3.4 million.

While the new infrastructure was under construction, the Southington Water Department prepared for the creation of the new pressure zone. To transition a portion of the system to a new, higher pressure zone required careful planning to avoid system shutdowns and prevent water main or service line breaks as a result of pressure changes. As part of the project design, distribution system hydraulic modeling was performed to determine the impacts of the new pressure zone on the system.

The Water Department was proactive in keeping the public informed. This included public meetings and mailings to customers who would be transferred to the new pressure zone, and a program of providing pressure reducing valves to some customers. As a result, the transition of customers to the new pressure zone went smoothly. The new pump station, storage tank, and water main went into service in October of 2017 with no interruption to customer service, and no water main or service line breaks during the transition.

Utility managers and elected officials are often worried about getting pushback from residents when they ask for a rate increase. This can often result in several years of unchanged rates. However, while rate revenue remains flat, costs for labor, equipment, materials, supplies, and energy continually rise, ever widening the expense vs. revenue gap. As a result, system maintenance is often deferred, until a crisis such as a water main break results in expensive, unfunded work being undertaken, under rushed conditions.

Based on thorough research and a sensible master plan, the Southington Water Department presented the community with a clear plan, financed by a modest rate increase and a long-term low-interest loan. There was no significant objection from the public.

All four elements of this project were needed. The Master Plan determined the water system needs and how to meet them. The rate study determined the financial resources available, and helped with a plan to fill any gaps. Sufficient funding gained through a modest rate increase, along with DWSRF funding, was also critical – as well as the community-wide support gained by presenting a clear path forward. As a result, system-wide hydraulics issues are being resolved and residents are enjoying a safer, more reliable water system. 💧

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