THE WAVE

… showcasing Quality, Excellence and Innovations

Tata & Howard Newsletter Spring 2008

As a result of continued growth, Tata & Howard will be relocating the corporate office in July to **67 Forest Street in Marlborough, Massachusetts**. Stay tuned for more details in the coming weeks.

Tata & Howard is also pleased to announce that we have opened an office in Goodyear, Arizona. The new office will allow us to better serve our clients in the Phoenix area.

Do You Have a Properly Calibrated Hydraulic Model?

A properly calibrated hydraulic model is a powerful tool. It can be the primary resource to develop a utilities' Capital Improvements Plan, as well as to evaluate the impact of changes or additions to the system. Fire flow simulations, unidirectional flushing plans, extended period simulations, water quality assessment, and energy cost analysis can be evaluated using a properly calibrated hydraulic model.

Hydraulic modeling of distribution systems is based on several factors. An understanding of the working conditions of operating scenarios is one critical component in developing a useful, reliable model. Model calibration is another key element in developing a model. The more reliable and recent the data, the more likely the model will adequately represent actual field conditions. The condition and level to which a model is calibrated and verified against actual system operational data is directly related to the degree of confidence to which a management decision is made on that system. Standard engineering practice recommends that water distribution system models and master plans be updated every 10 years.

Hydraulic Modeling

Hydraulic modeling is one of Tata & Howard's key strengths. We have successfully provided innovative and cost effective solutions for our clients. For example, a community had planned a $3 million infrastructure project to balance the heads between their two water storage tanks. This improvement had been recommended by a previous consultant. After reviewing the hydraulics, we suggested evaluating the potential of separating the system into two service areas by closing valves and constructing a low head booster pump station. The client agreed, and our suggestion became a recommendation after completing the hydraulic evaluation. The revised recommended improvement saved the client $2.8 million in capital construction costs.

Field Testing

Locations:
Westborough, MA (508) 366-5760
Lakeville, MA (508) 946-1732
Meriden, CT (203) 235-5760
Nashua, NH (603) 883-5760
Goodyear, AZ (623) 935-0487

Mattapoisett River Valley Water District Treatment Facility

The Towns of Fairhaven, Mattapoisett, Marion and Rochester have worked together for the last 20 years on water supply development and water resources protection for the Mattapoisett River Valley.

In response to declining water quality and loss of source capacity, the towns formed a study committee to review current and future water supply capacity, demands, water quality, and treatment alternatives for the Town supplies. The committee pursued Tata & Howard, Inc. to provide technical assistance for the study. After extensive pilot testing in the valley to evaluate the effectiveness of alternative iron and manganese removal treatment processes, the committee recommended the formation of a regional water district to construct and operate an iron and manganese removal treatment facility.

Following town and state legislative approval, the Mattapoisett River Valley Water District (MRVWD) was formed. The District engaged Tata & Howard to complete the funding applications, design, permitting and construction management of the 6.0 million gallon per day (mgd) treatment facility.

The MRVWD water treatment facility (WTF) project will treat water from eight wells belonging to three towns. Treatment processes include ozone oxidation, membrane ultrafiltration, recycle and chemical feed for pH adjustment and disinfection. The MRVWD facilities also include approximately 5 miles of raw water transmission mains between the wells and the WTF, finished water transmission mains from the WTF to the existing town transmission mains, and control/metering stations. The existing pumping stations were upgraded to pump water to the District WTF, but operation of the pumping stations will remain the responsibility of the individual towns.

Membranes

MRVWD Facility

MRVWD Dedication

Construction of the facilities started in August 2006. The WTF is currently undergoing start-up testing and will be operational in Summer 2008. The anticipated total cost of the facility including water mains, control/metering stations and pump station upgrades is approximately $16.5 million. By constructing a regional facility, the towns were able save over $4.9 million in design and construction costs in comparison to individual treatment facilities.

A dedication ceremony for the facility was held on May 30, 2008. Legislative delegation, representatives from DEP, Tata & Howard and the communities joined the District in commemorating the construction of this facility.

T & H announces promotions

Patrick S. O'Neale, P.E. has been appointed to the Board of Directors. Patrick manages the firm's Lakeville office, which serves southeastern Massachusetts. Patrick has been integrally involved in the design and construction of the 6 million gallon per day water treatment facility for the Mattapoisett River Valley Water District.

Ronald S. Ponte has been promoted to Vice President. Ron has been a leader of the water treatment design team at Tata & Howard. He has specialized experience in both water treatment and instrumentation technologies.

Jennifier W. Rzasa, P.E. and **Karen L. Pighetti**, P.E. have been promoted to Associate. Both Jenna and Karen have concentrated experience in all facets of water system consulting services, including hydraulic modeling, asset management and infrastructure design. Jenna and Karen have most recently provided project management services to the Aquarion Water Company with systems in New Hampshire and Massachusetts, respectively.