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The Wave

Winter 2013

TATA & HOWARD

Unsurpassed Solutions in the Water Environment

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Leach Engineering Consultants Joins the Tata & Howard Team

Tata & Howard has acquired the assets of Leach Engineering Consultants, PA, a civil engineering consulting firm located in St. Johnsbury, VT. Founded in 1990, Leach Engineering Consultants specializes in creative and cost-effective water and wastewater solutions. Dedicated to meeting and responding to diverse client needs, Leach Engineering Consultants is highly skilled in obtaining municipal, state, and federal approvals and in securing grant and low interest loan funding. Additional services include treatment, land development, and site engineering, as well as planning, design, and construction of municipal water, wastewater, and stormwater systems.

"Leach Engineering Consultants' exemplary service to the northern New England water and wastewater market, with key focus on delivering cost-effective and innovative solutions, fits the Tata & Howard

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Leach Environmental Consultants Joins the Tata & Howard Team, continued from front page

philosophy perfectly," said Donald J. Tata, P.E., co-founder and President of Tata & Howard. "After working with the high level of talent on Leach's staff, it became apparent that a long term business relationship would be invaluable. Their client dedication and expertise in wastewater engineering and funding procurement, combined with a 23-year history of superior performance and long-term client retention, is entirely congruous with our culture of teamwork, innovation, and unparalleled client support."

In addition, Leach brings a significant client base to Tata & Howard. Tata noted, "Leach will provide Tata & Howard with geographic expansion into northern New England and strengthen existing client relationships, particularly in the wastewater field."

Gary A. Leach, P.E., founder and Chief Executive Officer of Leach Engineering Consultants, will continue to lead the Vermont office as a Vice President of Tata & Howard. "We are eager to combine our individual proficiencies and resources to serve our clients' needs in the best way possible," he commented. "We are very excited about being part of the Tata & Howard team and know that together we can continue to provide unprecedented solutions and service to our clients."

Our New Office Location in St. Johnsbury, Vermont

36 Eastern Avenue, Suite 6
St. Johnsbury, VT 05819
T: 802-748-9009
F: 802-748-9023
vermont@tataandhoward.com

Tata & Howard Welcomes New Team Members

Gary A. Leach, P.E., Vice President, has over 36 years of engineering experience with specialized expertise in water and wastewater system evaluations, design, and construction. Gary has completed over 50 water and wastewater system evaluations and has a history of obtaining a majority of the funding in the form of grants. Gary manages our Vermont office.

Melissa A. Leach, P.E., Project Manager, has over 25 years of civil engineering experience with targeted expertise in client services, administration, and management. Melissa works from our Vermont office.

William J. Dawson, P.E., Associate, has over 33 years engineering experience with expertise in study, design, permitting, construction administration, and start-up of water resources and water pollution control infrastructure facilities. Bill has worked extensively on pumping station design and rehabilitation, comprehensive water planning studies, treatment plant design, and dam and spillway rehabilitation and permitting. Bill joined us as part of the Leach acquisition and works from our Maine office.

Kenneth I. Trask, P.E., Associate, has over 36 years engineering experience in planning, design and construction of water and wastewater systems. He has also been an adjunct professor at Norwich University instructing classes and labs in Sanitary Engineering and Fluid Mechanics. Ken joined us as part of the Leach acquisition and works from our Vermont office.

Brian P. Robillard, P.E., Project Manager, has over 20 years of civil engineering experience with over 13 years of experience in water utility engineering. He has targeted expertise in management of capital improvement projects, planning, budgeting, hydraulic modeling, value engineering, and water distribution studies. Brian works from our Connecticut office.

Ryan P. Neyland, P.E., Senior Project Engineer, brings almost ten years of comprehensive drinking water engineering experience to Tata & Howard. He has targeted expertise in water treatment including pilot studies, full scale designs, and construction oversight. Additionally, Ryan has significant experience with master planning and distribution system analysis. Ryan works from our Marlborough, MA office.

ADDITIONAL NEW EMPLOYEES

Charles D. Miegs, William A. Nickerson, Isaac E. Jensen, Robert H. Keating, and Mark A. Sanville in Vermont, and Daniel P. Bishop in Maine. Welcome!

Bingham, ME Wastewater Treatment Plant Improvements Planning, Design, and Construction Services

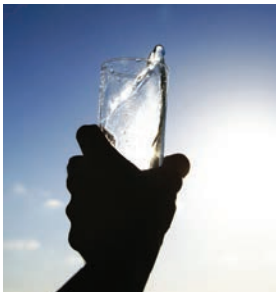
Leach Engineering Consultants, now Tata & Howard, originally provided planning, design, and construction services for the replacement of a 200,000 gpd package activated sludge wastewater treatment plant in Bingham, Maine, where wastewater is directed to the facility through an 8-inch force main. The plant improvements included a new headworks building with mechanical screen and aerated grit tank, a circular reinforced concrete activated sludge type treatment plant with diffused aeration system, an aerobic digester, and a final settling tank. Clarified effluent is now disinfected in a chlorine contact tank. Waste sludge from the plant is applied to a nearby permitted land. The discharge of the plant was routed to Jackson Brook via an 8-inch gravity sewer.

The contract construction cost for the Phase I upgrade was $1,050,000, and the project received 90% of its funding in the form of Maine DEP, CDBG and USDA Grants, with the balance funded by the USDA Rural Development low interest loan.

Tata & Howard is presently providing construction administration and resident observation for the Phase II plant improvements including dome covers for the aeration/clarifier tanks, DO probes and blower VFD's, more energy efficient process building window glass, a new insulated roofing system, and a new energy efficient propane fired boiler. In addition, three new replacement pump stations and an interceptor sewer are being constructed to eliminate infiltration and inflow and improve energy efficiency. The total project costs are $2,050,000 and funding was provided through USEPA STAG grant and USDA grants and a low interest USDA loan. The grants equaled 75% of the total cost of the project.

Third Unregulated Contaminant Monitoring Rule (UCMR3)

UCMR3, which was signed into effect on April 16, 2012, is the third round of contaminant testing mandated by a 1996 amendment to the federal Safe Drinking Water Act. Once every five years, the EPA issues a list of up to 30 unregulated contaminants and requires all public water systems serving more than 10,000 people, as well as 800 representative public water supplies serving 10,000 or fewer and 800 public water supplies serving 1,000 or fewer, to monitor them.



UCMR3 testing occurs between January 2013 and December 2015 and helps to determine the geographic prevalence and levels of these contaminants throughout the country. This information, combined with toxicological data, provides baseline data that the EPA uses to determine the necessity of future drinking water regulations.

Trivia Corner

When water flows through a full pipe, the water is fastest in what part of the pipe?

A) All parts flow at the same speed.
B) Top.
C) Middle.
D) Bottom.

C) Middle. The edge of a pipe has friction. The friction slows down the water in contact with it. Therefore, the middle is the fastest.

Franklin, NH Water Treatment Plant, Water Main, Directional Drill, and Design of Two Water Storage Tanks

Tata & Howard has been providing design, permitting, funding application assistance, construction administration, and resident observation services for the City of Franklin since 2009. The Tata & Howard team has managed several phases of work, including the design and construction of the water treatment plant and distribution system improvements.

The first phase was the design and construction of 2,500 linear feet of water main on Hill Road to connect a new water treatment plant to the City's distribution system. This project also involved use of four bioretention systems to treat and manage stormwater from the roadway, and was constructed in 2010.

The second phase of our work with the City included the design and construction of two parallel 2,500 linear foot sections of 12-inch diameter HDPE crossings beneath the Pemigewasset River using horizontal directional drilling to transport water from the City's Franklin Falls Well to the water treatment plant site.

Tata & Howard managed the survey and geophysical studies and prepared a Preliminary Design Report and Environmental Review documents for several phases of work. The City's wells are surrounded by lands controlled by the US Army Corps of Engineers, which required completion of an extensive permitting process to secure permissions for the final design of the project.

Tata & Howard completed design, construction, permitting, and funding applications for a 1,000 gallons per minute groundwater treatment plant to remove iron and manganese from three of the City's wells. The plant has four pressure filters containing Greensand Plus media and uses sodium hypochlorite for oxidation and sodium carbonate (soda ash) for pH adjustment. This plant went online July 9, 2012.

Finally, Tata & Howard provided design services for the construction of a new prestressed concrete tank at the site of an existing tank. The existing tank was in poor condition and due to the site characteristics, it was determined that construction of the new tank on the existing foundation of the old tank would be the best option. A second tank on the site was demolished in 2013 and a new prestressed concrete tank will be constructed in its place.

Falmouth, MA Engineering Design Services for an 8.0 mgd Surface Water Treatment Facility

The Town of Falmouth awarded Tata & Howard the design and permitting of a new 8.0 mgd surface water treatment plant. Falmouth has endured many years of water quality impacts as a result of the Long Pond unfiltered surface water supply. Long Pond is the Town's largest source providing 60% of the annual water supply and impacting water quality to consumers daily. Over the past several years, faced with regulatory drivers and continued water quality concerns, the Town sought to determine the best long term plan for their primary water source. In 2011, the Town of Falmouth hired the team of Tata & Howard and CH2M HILL to conduct a thorough evaluation and pilot testing of treatment processes that could be used to improve finished water quality and allow the Town to maintain compliance with current regulations and prepare for compliance with anticipated regulations. Eight treatment trains were pilot tested. Two seasons of pilot testing were conducted to confirm operating ranges for the various processes and compliance with established water quality goals.

The treatment processes include use of pre-oxidation, coagulation, dissolved air flotation (DAF), ozone, deep bed granular activated carbon filtration, disinfection and corrosion control. The DAF is used for algae and particulate removal; the ozone is used to address taste and odors, organics, disinfection by-products, and algal toxins; and the filtration is used to remove particulate and microbials from the water.

Implementation of the proposed Long Pond Water Treatment Plant will greatly enhance the quality of water and protection of public health in Falmouth. Regulatory and State Revolving Fund (SRF) drivers will require efficient execution of design and permitting of the proposed facilities to meet the required submission dates and secure SRF funds for the project. In addition, the duration of the project necessitates the optimization of the existing treatment facilities to both maintain regulatory compliance and provide the best possible supply for consumers during the design and construction phases.

Milford, MA Water Treatment Plant Grand Opening

On October 26, the Milford Water Company hosted a grand opening and tour of the Dilla Street Water Treatment Plant. Tata & Howard provided construction administration services for the project, which utilizes dissolved air flotation (DAF) process. For more information on this event, please scan the QR code at right with your smartphone.

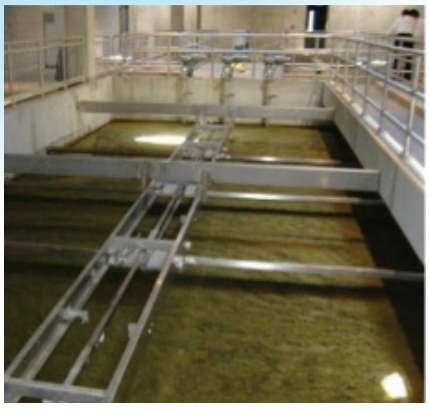
Tata & Howard's Randy Suozzo, P.E., Project Manager for the Dilla Street Water Treatment Plant, answers questions during the tour.

Kachina Village Improvement District (KVID), AZ Water System Efficiency Energy Audit

In October of this year, Tata & Howard completed an energy study and hydraulic model for the KVID. The energy study targeted the water production assets of the KVID and the distribution system. During the course of the study, the efficiency of the well pumps and booster pumps were evaluated. In addition, the operational practices of the distribution were reviewed. The results of the study indicated that the pump efficiencies ranged from 27% to 60%. T&H recommended that the KVID replace several low performing pumps with the potential to save approximately $23,000 in annual power costs. Additionally, KVID may be eligible for a rebate from Arizona Public Service Company (APS) of approximately $20,000. The estimated savings over a ten year period is approximately $134,000.

Norwich Public Utilities Stony Brook Water Treatment Plant DAF Pilot Study and Design

Norwich Public Utilities (NPU) in Connecticut has contracted with Tata & Howard for the design and construction of renovations at the Stony Brook Water Treatment Plant. Beginning in the summer of 2010, an abrupt change in raw water quality as a result of a green algae bloom created serious challenges for operation of the Stony Brook plant. NPU issued a request for proposals for converting the existing filter clarifier units to buoyant media to address the algae issues. Tata & Howard proposed an alternative approach of installing dissolved air flotation (DAF) upstream of the filter clarifier units. The DAF process is well suited for removal of algae without contributing to taste and odor problems, and has the additional important benefit of reducing disinfection by-products in the distribution system, which the media conversion project would not address.



Tata & Howard recently completed one warm water season of DAF piloting at the Stony Brook Water Treatment Plant. As part of the pilot study, Tata & Howard conducted bench scale testing to examine the performance of coagulants at various dosages and mix rates for the best removal of disinfection by-product precursors. The bench scale testing was performed simultaneously with the pilot test and results were incorporated into the pilot test program. Initial results from the pilot process showed that the DAF process could triple current filter run times at the plant while providing large decreases in total organic carbon and disinfection by-products. A pilot study report was prepared, including water quality data, evaluation of the treatment system, chemical dosages, flow rates, conclusions, recommended process, and design criteria.

After approval of the pilot study, design drawings and specifications will be prepared for a 4.0 mgd capacity DAF clarifier system. Additionally, bidding assistance, construction administration, and resident observation services will be provided.

Client Testimonial

"Tata & Howard is on the cutting edge in the water industry and is first in picking up new information."

Bob Wesneski, President
Avon Water Company

Tata & Howard Happenings

Donald J. Tata, P.E. and Tata & Howard Receive Awards from MWWA

On November 8, Don received the prestigious William H. McGinness Award at the MWWA Dinner. The award is given to an affiliate member whose knowledge and contributions to the profession merit recognition. Tata & Howard also received the Presidential Award for sponsorship supporting MWWA's initiatives, programs, and events.

Promotions

We are please to announce that both Amanda K. Cavaliere and Randy A. Suozzo, P.E., have been promoted to Project Manager.

Amanda has been with the firm for over 10 years, and has targeted expertise in water and wastewater system design. She is a team leader and recently finished work for the design and construction of the Drinking Water State Revolving Fund (DWSRF) Water Main Improvements located in Emerald Lake Village District of Hillsboro, New Hampshire. Amanda's contributions to the project were instrumental to its overwhelming success. Currently, Amanda is serving as Project Manager for the Town of Wayland, where she is overseeing multiple projects including water distribution system improvements, pump station chemical safety upgrades, and water treatment.

Randy has been with the firm for over seven years, and has targeted expertise in water treatment facility design. He worked in a key capacity on the Town of Wayland's Baldwin Pond Water Treatment Facility, and is currently Project Manager for upgrades to the Cherry Valley and Rochdale Water District's water treatment plant. Additionally, Randy recently completed construction administration and resident observation services for the Milford Water Company's Dilla Street water treatment facility.

Anniversary Celebration

On October 21, employees celebrated Tata & Howard's 21st Anniversary. After welcoming new team members, all enjoyed a catered Italian luncheon and were treated to a raffle afterwards. Prizes included an iPad Mini, flat screen TV, a Fit Bit, Bose sound system, Blu-ray player, and a variety of gift cards. The celebration was a fun event for all who attended.

New Website

On October 1, Tata & Howard launched a new website complete with updated projects and a more user friendly interface. Please visit us at www.tataandhoward.com to see our new look, and check back often for all the latest T&H projects, news, blog, and events!

Scan here with your smartphone to go directly to our homepage

Our New Hampshire Office Has Moved!

On December 1, Tata & Howard moved our New Hampshire office from Nashua to Concord. Paul E. Cote, P.E., Associate, manages the Concord office.

Contact Information:
Tata & Howard, Inc.
10 Ferry Street
Concord, NH 03301
Phone: 603-883-5760
Fax: 603-883-1314
concord@tataandhoward.com

TATA & HOWARD
Unsurpassed Solutions
in the Water Environment

67 Forest Street
Marlborough, MA 01752
T: 508-303-9400 x121
F: 508-303-9500

www.tataandhoward.com

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