The Pipeline
the official Dufresne Group newsletter

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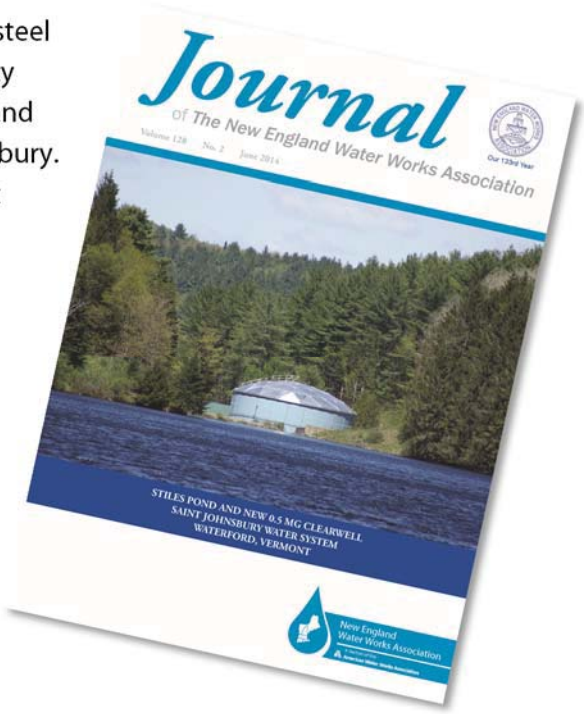
Dufresne Group projects featured in NEWWA

The water system for the town of St. Johnsbury, Vermont was recently featured on the cover of *Journal* of The New England Water Works Association (NEWWA). See below for the associated article.

The cover photo shows the new 0.5 million gallon glass fused-to-steel clearwell at the Saint Johnsbury, Vermont Water Treatment Facility west of Stiles Pond. Stiles Pond is located in Waterford, Vermont and serves as the surface source of supply for the Town of Saint Johnsbury. The Saint Johnsbury water system provide a vital role today. Saint Johnsbury provides high quality water for the production of insulation materials used in the high tech electronic transformer industry for Weidmann Electrical Technology; one of Saint Johnsbury's largest customers and the area's largest employer.



> *"In the last 6 years, Saint Johnsbury officials have spent $32,000,000 for infrastructure replacement…including $16,200,000 in grants from USDA Rural Development…"*

The water distribution system extends geographically in all directions, serving an industrial park in the Town of Lyndon to the north and Fire District No. 1 to the south in Barnet, Vermont. Several other public water geographical expanse of the system and the use of free chlorine as a primary and secondary disinfectant have created a challenge for disinfectants/disinfection byproduct compliance. However, recent improvements and advanced operational methods have demonstrated reliable results in compliance with Stage 2 D/DBP requirements.

During the past five years, the Saint Johnsbury water system has embarked on a major infrastructure replacement program. Current and recent projects total about $32,000,000. These expenditures have replaced many of the key

elements of the distribution system including most of the water storage tanks and much of the water transmission main. In addition, the majority of the west side of the water distribution system has been replaced and the old cast iron main removed from the streets. However, even in spite of this significant capital program, much work remains. The old painted steel clarifier/filter tanks at the water treatment facility require replacement. Several major river crossings require replacement, and miles of old, unlined cast iron main on Route 2 east of the town requires cleaning and lining.

The recently completed capital improvements and the future water system needs come concurrently with federal requirements for combined sewer separation and elimination of combined sewer overflows as well as wastewater treatment system upgrades due to aging technology. These improvements must all be accomplished while maintaining affordable water and wastewater rates for system customers. These investments will push our financial capacity to the limit but will provide a sustainable system for our children and grandchildren.

Submitted by: RED Dufresne, Vermont Director NEWWA and President of Dufresne Group
Cover photo: Dan Gray, Chief Operator, Saint Johnsbury Water System
Reprinted with permission from the New England Water Works Association.

See www.dufresnegroup.com for an additional article published in the *Journal* about the St. Johnsbury water system.

DG Brings AC Pipe Bursting to Vermont

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Pipe bursting is a well-proven technology for replacing aging, deteriorating or undersized pipes in the water, sewer and storm drain industries. This technology limits the amount of excavation required on a project to reduce project duration and impact to the surrounding areas. Using pipe bursting, the old pipe provides the path for the new pipe and as such provides a final benefit from the investment made decades ago. Pipe bursting also limits environmental impacts as there is less excavation and equipment use, which lowers the project's carbon footprint.

Pipe bursting is performed around the world for replacing a multitude of pipe materials. The pipe materials include those that you would expect such as clay tile, concrete, PVC, HDPE. In addition, pipe bursting methods can be used to replace cast iron, ductile iron and even steel pipe. However, replacing one type of pipe that is most conducive for replacement using pipe bursting methods has been problematic in the United States from a regulatory basis. This pipe material is commonly referred to as asbestos cement, transite or AC pipe. The regulatory hurdle in the US is due to the EPA's current concern that any AC pipe that has undergone the mechanical process of pipe bursting should be subject to NESHAP (National Emission Standard for Hazardous Air Pollutants). In short, this would require an AC pipe bursting project site to comply with the NESHAP requirements for active and inactive waste disposal sites.

Dufresne Group is currently working with Bellows Falls on obtaining approval to complete a pipe bursting project on AC pipe. To learn more see the Dufresne Group website at www.dufresnegroup.com.

Watch for future issues of the Dufresne Group newsletter. If you have any comments or questions or wish to be taken off our mailing list feel free to email aday@dufresnegroup.com or call 802-748-8605

Dufresne Group Increases Staff by 40%


Matt Bissell


Brandyn Gadapee


Andrea Day


Charles Flower, III


Tristan Brennan


Jeff Olofson

Dufresne Group is pleased to announce a 40% staff increase due to additional workload. Dufresne Group provides engineering services to municipalities in Vermont and New Hampshire from its four area offices in Windsor, Barre, St. Johnsbury and Manchester, Vermont. Recently, workload has increased substantially due to several large infrastructure projects in Vermont. These projects include water main, sewer main, storm drain, and streetscape work including full depth roadway reconstruction with sidewalk and curb. This work is funded in part with low interest loans from the State of Vermont and loan grant funds from USDA Rural Development. The largest of these projects is located in Saint Johnsbury, Vermont. Saint Johnsbury received a grant of $10,600,000, one of the largest grants under the American Recovery and Reinvestment Act (ARRA) funding program. Another large water replacement project is located in Bellows Falls, Vermont. The new staff members in St. Johnsbury include: field engineers Matt Bissell from Walden; Brandyn Gadapee from Danville and project engineer and marketing director, Andrea Day, PE, who is returning to the Northeast Kingdom after working in Montana for the past seven years. Charles Flower III, formerly from Manchester, joined the Barre office as a field engineer. Tristan Brennan from Rockingham and Jeff Olofson from West Lebanon, NH joined the Windsor office as field engineers. Andrew Van Buskirk of Barre also joined DG for the summer in the Barre office.

Northfield Common gets new Sidewalks

The Common in Northfield has served as a town center since incorporation. It was in need of infrastructure improvements including curb and sidewalk, street reconstruction, and updated lighting. Power poles obstructed pedestrian traffic and needed to be removed and existing pedestrian facilities also needed to be updated to meet the Americans with Disabilities Act (ADA).

The project to complete these improvements was funded through the Local Transportation Facilities (LTF) section of the Vermont Agency of Transportation (VTrans). Dufresne Group (DG) provided Resident Project Representative services for the construction of over 1,000 lf of granite curb and 6,000 sf of concrete sidewalk. See www.dufresnegroup.com for more information on current transportation projects we are working on.