



Hi I'm
Matt

THE MATTABASSETT DISTRICT

Preserving the environment
for future generations to enjoy.



MATT'S NEWSFLOW

2016 June Newsletter

A message from the Chairman.....

Read more about Matt in
the newsletter

John S. Dunham, P.E.
District Chairman

Arthur G. Simonian, P.E., LEED
Executive Director



John S. Dunham, P.E.

Many changes have come to the Mattabassett District since our last Newsletter. The District hired a new Executive Director, Art Simonian. Art comes to us with a long record of public service after having served as the Town Engineer in the Town of Berlin for the past ten years. Welcome Art, and I know I speak for all of the Board Members when I say we are excited to have him as evidenced by his enthusiasm and passion for the District.

The Board of Directors has experienced changes as well. I am writing to you as the newly elected Board Chairman. I am honored to be taking on this leadership role for the District and am appreciative of the support I have received from the staff and Board.

Additionally, The District welcomes four new members from the City of New Britain, former Mayor of New Britain, Timothy Stewart, past Board Member, Paul Catanzaro, Tonilynn Collins and Mary Marrocco.

As we embark upon our future with new leadership and a newly renovated plant, we look forward to serving the needs of the communities as well as providing clean water for many future generations.

Member Towns and Representation:

New Britain

Paul Catanzaro
Peter Centurelli
Tonilynn Collins
Mary Marrocco
Timothy Stewart

Cromwell

Bonnie Anderson
Doug Sienna
Thomas Tokarz

Berlin

John S. Dunham, P.E.
Ed Kindelan
James McNair

Middletown

Dale Aldieri
David Bauer
Joseph Samolis
Thomas Serra

The District would like to thank William P. Candelori, Ph.D. for his dedicated service to the District both as a Board Member since 2002 and for his years served as Chairman from 2006-2015. You will be missed. Also, recognition is extended for many years of service to our other outgoing New Britain Directors (Angelo D'Alfonso, Gerry Amodio and John Valengavich). Thank you for your dedication to the Board.

About the District.....

The *Mattabassett District's Water Pollution Control Facility*, one of Connecticut's most efficient *Publicly Owned Treatment Works (POTW)*, processes wastewater from New Britain, Berlin, Cromwell, Middletown, Newington, Rocky Hill and Farmington. Once treatment is provided, clean water is discharged into the nearby Connecticut River. *The District* began operation in 1968, as a physical/chemical treatment facility; then in 1987, the facility was upgraded to provide secondary treatment; and currently has substantially completed a second upgrade to provide Nitrogen Treatment that will meet the new State and Federal Standards.

A special note of thanks to our staff for their unselfish commitment to the District.

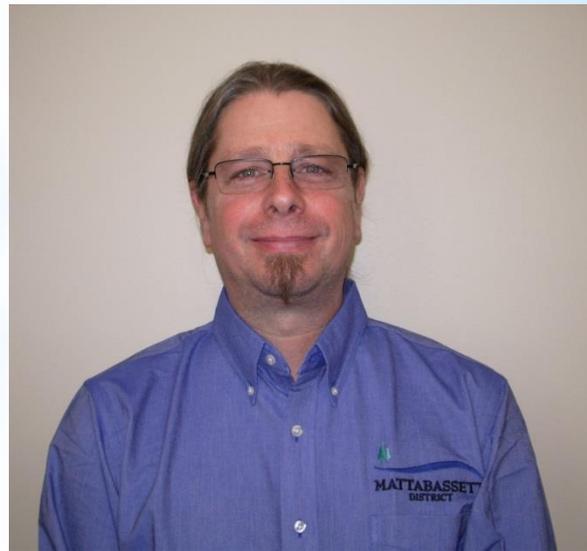
For the latest newsletter please visit www.mattabassettdistrict.com



Art Simonian became the New Executive Director of The Mattabassett District in June of 2015. He was formerly the Director of Public Works and Town Engineer for the Town of Berlin, CT. He has a B.S. in Civil Engineering and an MBA in Finance. He managed a department of 39 staff with an annual budget of eleven million dollars. He oversaw four large departments: Highways, Water Pollution Control, Facilities/Building Maintenance, and Engineering. Art shares his expertise in preparing budgets, analyzing and assessing financial cost for various construction projects, producing monthly reports and presentations at town meetings with the District. He has initiated, implemented and adapted high performance and energy saving projects funded through grants and performance contracts. Art has extensive knowledge of State and Federal regulations, GASB Asset Accounting Management, and Human Resources experience. His public works experience with sewer systems and financial management, have made for a smooth transition into the wastewater industry with new cost saving ideas already implemented. Art grew up in New Britain and resides with his family in Farmington, CT.

Arthur G. Simonian, P.E.
Executive Director

Brian Warman is the new Operations Manager. He graduated with a degree of Occupational Proficiency in Water and Wastewater Treatment Technology in 1993, took a position with the District in 1993 and has worked here ever since. He started as an operator and worked his way up through the ranks as a Class III Supervisor, and eventually a Manager. He has held a Class IV CT Wastewater Operators license since 2005. He has always placed the highest values on the quality and cleanliness of sewer discharge as this was the reason he chose the profession. His main goals as Operations Manager are regulatory compliance, air emissions and sanitary effluent consistently below regulatory limits, and maintaining a team approach to motivate and encourage staff.



Brian Warman
Operations Manager

Employee Highlights

We would like to congratulate a few employees on receiving operator certifications:

- Jan Dusza – Class IV Operator Certification
- Mike Manfre – Class IV Operator Certification
- Ty Wagner – Class III Operator Certification

Ribbon Cutting Ceremony June 18, 2015 Nitrogen Upgrade & Expansion

We are excited to move forward with a recently upgraded facility, under the leadership of a new Executive Director with a collective, cooperative and proactive vision.



The Mattabassett District Construction Photos

Start of Construction June, 2012



Dec 2013 18 months of Construction



Oct 2013 16 months of Construction



April 2014 Construction



October 2014 Construction



August 2015 Construction Finalized



Construction Updates.....

The Mattabassett District Upgrade Project was certified as being substantially complete on July 1, 2015. On that date, the District Staff regained operation and maintenance of the entire upgraded facility. This was a significant change from the prior three years in which the staff was challenged with temporary systems, relocations, bypassed systems, shut downs and other conditions directly related to keeping the facility operational during the \$100M construction project.

Some of the new processes and equipment included in the upgrade include:

- New secondary treatment process, including a side stream reactor for pre-treatment of return sludge and centrate waste to control nitrogen.
- New Secondary Effluent Pump Station for using during specific high flow conditions.
- A new Chemically Enhanced Primary Treatment system with highly automated control of flow path and chemical addition.
- A new Fluidized Bed Incinerator with a state of the art emissions system.
- New carbon and chemical odor control systems throughout the plant.

Wright-Pierce (W-P) has been focusing their design efforts on ensuring all of the work that was required by the project is accomplished as intended and identifying work remaining as a punch-list item. C.H. Nickerson & Company, Inc. (CHN) and their subcontractors have been focusing their efforts on accomplishing any remaining work, including items on the punch list. The goal is to have all work completed by late spring of 2016.

One substantial item that was remaining (W-P, CHN and the District) is the performance of the stack test on the new incinerator which was completed in April 2016. The new air emissions system was included in the project as part of a new regulation and it is the first of its kind for a sludge incinerator in New England. It is the first time one has been constructed and it will be the first to be permitted as a result of the new regulation.

Now into the third and final year of construction on The Mattabassett Water Pollution Control Facility upgrades, another major milestone achieved with the base course of paving work finished in Fall 2015. The installation of final grading and site work includes new grass areas, over a mile of precast curbing and over 5 acres of new paving covering over areas containing nearly five miles of underground piping and over a mile of concrete encased electrical utilities that interconnect twelve buildings and twenty process tanks.

All of the new equipment and process upgrades have already been put into operation and the remaining sludge process systems, including new incinerator equipment, are being “fine-tuned” this year. While virtually every square foot of the project has had construction activity taking place over the past thirty months, that had to be conducted without interrupting the plant operation, including the daily delivery of Merchant sludge. Accomplishing the construction activities was only possible by the coordinated efforts put into planning and scheduling between The District, Wright-Pierce and Nickerson along with their subcontractors.

Wright-Pierce and C. H. Nickerson

Plant Updates

Odor Control Enhancements: With the recent \$100 million dollar upgrade new odor control systems were installed. Six carbon systems handling 53,000 cubic feet of air per minute and two chemical scrubbers handling 8,400 cubic feet of air per minute were installed throughout the plant to reduce odors. Perimeter odor monitors, with real time data monitoring and alarms, were also installed along the north end of the property. Besides the technical improvements in odor control systems operationally, we have made some proactive changes including weekly plant walks to determine odor sources, better management of sludge, grease and septage deliveries to reduce high loading along with more regular preventative cleaning of our primary settling tanks.

Middletown Forcemain and Pump Station: In an effort to encourage regionalization and economic consolidation Mattabassett made provisions in the recent plant upgrade to accommodate for the future wastewater flows from the downtown area of Middletown. Middletown is currently in the process of installing the forcemain between DeKoven Drive and Mattabassett District's property line, which includes a total of just over 6,000 feet of sanitary sewer forcemain. They also received approval to support the design and construction of a new sewer lift station. Once Middletown is complete with both projects, tentatively scheduled to be placed on-line by end of 2018, they will close their existing Wastewater Treatment Plant and direct their flows into the newly upgraded Mattabassett Treatment plant. Peak flows through Mattabassett's primary treatment have been upgraded 38% more to accommodate Middletown's flow along with peak storm discharges in excess of 100 million gallons per day.

Nitrogen Project Budget and Completion Date: The original project budget including design and construction was estimated at \$115,000,000 dollars as authorized through a bonding resolution in 2011. With the concerns from the Board of Directors to keep costs to the constituent members as low as possible, applications for grants were successful in receiving about \$1.5 million dollars during design. The construction portion of the project was also reduced through the efforts of the Board and District by self-performing Construction Management. This effort alone saved about \$2.5 million dollars. Prior to construction beginning in 2012 a Clean Water Fund application to CTDEEP was submitted and approved to fund the \$107,800,000 estimated project costs. In an effort to further reduce the financial impact to the constituent members another grant was applied for and successfully received, totaling approximately \$24 million dollars. Total project design and construction costs are expected to be \$111 million dollars, which is \$4 million dollars below budget. In total nearly \$26 million dollars was received in grants on the project. Through all of the efforts of the Board and District the \$115 million dollar project was realized at a total impact to the constituent members of approximately \$101 million dollars, including interest costs. This is a savings of \$14 million dollars over the original authorized amount on the project. In addition, District staff also fund other savings by lowering the interest burden over the next twenty years.

Plant Updates (cont)

With a majority of the punch list items nearly complete, with substantial cost savings and completion achieved in July 2015, the project closeout is expected to occur by August 2016.

Positive Impact to Plant's Efficiency and Energy Savings:

Variable Frequency Drives (VFD) Drives, Nitrogen discharges on effluent, NOx emissions meeting new stringent Quad-L EPA regulations.

In addition, lighting fixtures were retrofitted with LED's, a waste heat recovery system was installed to scavenge heat from the new incinerator to heat other buildings in the plant. Boilers were replaced with natural gas fired high efficiency boilers, and 60 Kilowatt roof-top solar panels were installed.

All of the energy efficiency improvements qualified the District for financial incentives through Eversource. The District has already received \$785,000 in rebate incentives on the project.

With all of the improvements made in the past three years the future focus is on proactive maintenance and more efficient organization of staff and supplies. We plan on implementing new computer technology to better manage work orders, parts inventory and scheduling of preventative maintenance. Operationally, the new incinerator is being maintained by a dedicated new position (Incinerator Manager) to insure the \$26 million dollar investment is operated safely, in compliance with regulatory requirements and properly maintained with critical capital improvements in the future. With the number of inter-dependent sensors, meters and other components troubleshooting and diagnosis is the newest challenge which we are ready for. Staff is being trained by vendors and outside consultants and attending seminars to insure they stay ahead of the technology and can better maintain our plant in the future.

The plant remains one of the most cost effective WWTP in CT and throughout the U.S. with an annual operating cost of about \$1.10/1000 gallons of treated effluent. Mattabassett remains committed to insure it is an environmentally and budget responsible partner to its four constituent members (New Britain, Middletown, Berlin and Cromwell) into the future.

Environmental Compliance

The District's General Permit For Nitrogen Discharges expired on December 31, 2015 and was renewed effective January 1, 2016. The renewed General Permit will be in effect through 2020. The District's annual target discharge limit for Nitrogen, under the current permit, and through the permit renewal period, is expected to stay set at 834 lbs/day. Since the new upgrade, we have stayed below this limit thus helping to improve water quality.

IDI SSI stack test & CEMS- Continuous Emissions Monitoring System

CT DEEP has completed their review of the startup materials of the new IDI SSI. All the monitoring requirements have been implemented and meet the new SSI regulations. EPA and CT DEEP have authorized the District to proceed with the incinerator stack test.

Environmental Health & Safety Plans

The District is updating all of the Districts current Environmental Health and Safety Programs with which the *District* operates in accordance with, and maintains. The following plans will be updated:

Confined Space - Electrical Safety - Hazard Communication & Emergency Response - Fall Protection - Lockout-tag-out - Hot Work Permit - Personal Protective -Equipment Respiratory Protection - Hearing Conservation - SPCC (Spill Prevention, Control and Countermeasure) - Underground Storage Tanks Operator Training - Hazardous Waste Contingency - Industrial Activity Stormwater Plan

Michelle Ryan, District Engineer

Awards

The District recently received the following awards:

- NEWEA - The Executive Director received the NEWEA's Alfred E. Peloquin Award which is given to individuals who have shown a high level of interest & performance in Wastewater Operations & who have made a significant contribution to the Wastewater field.**
- ENR - The Mattabassett District Project won the Engineering News Record Best Project Award for 2015. The award was based on the ability to overcome challenges and utilizing teamwork to accomplish project goals.**
- ACEC - The Mattabassett District Project won the State Engineering Excellence Award and was honored Nationally by the American Council of Engineering Companies.**
- AGC - The Project won the 2016 AGC Build CT Award from the Associated General Contractors in the "Large Renovation" category (greater than \$20 million)**

Matt's NewsFLOW! You may wonder why we selected this as the name of our newsletter.

MATT is obviously short for Mattabassett. However, it's also the name of the fish on our website, www.mattabassettdistrict.org. And it's also the name of the real fish that swims in an aquarium in the lobby of the wastewater treatment facility in Cromwell. The water in the aquarium is actually effluent – water taken from the facility after it has been cleaned and treated. The effluent is so clear that Matt, the fish, swims in it unaffected by the fact that the water once contained harmful contaminants.

