



Tonka Talk

Tonka Equipment Company Newsletter

Spring 2009

Chairman's Corner

By Fred Friswold

Stop or Go?

Massive uncertainty surrounded the economy and financial markets in recent months. We are already in one of the longest and deepest recessions in post-war history. Where do we go from here?

The prospect of possible Federal Stimulus Funding of water projects has also slowed up decision-making regarding new water treatment projects. Many communities have taken a "wait-and-see" attitude on projects in the planning stage until there is more clarity in the economic outlook and stability in the financial markets.

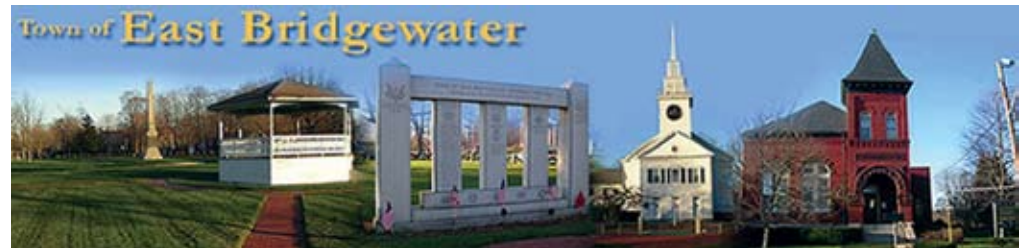
Decision-making tends to "freeze" in uncertain times. The result can be missed opportunity. The meek may inherit the earth—but not in our lifetimes. The many uncertainties that make us hesitate to move boldly have created an opportunity to get ahead of the game by moving projects forward when costs are low. Here are some factors that should be considered when deciding whether or not to get needed projects out to bid:

- Steel prices have returned all the way back to 2007 levels after doubling last year.
- Other commodities like copper, cement, and energy have returned to pre-bubble levels
- With the weakness in the housing and industrial sectors, fabricators and contractors are bidding aggressively for new business.

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East Bridgewater - Colorful History Continues

by Rick Mann



The Town of East Bridgewater has a long and colorful history not unlike most Eastern Massachusetts towns. East Bridgewater suffered an early set back during King Phillip's war in the winter of 1675-76, as nine out of the ten homes were burned during a raid on the town. The town also made cannon and muskets for the American Revolution. Jump ahead a couple hundred years and the Town of East Bridgewater is a typical picturesque New England town.

Infrastructure Improvements

Residents of town, tired of dealing with water quality problems due to high iron and manganese levels, hired Stantec Consulting to design two new water plants as well as 32,000 feet of new water mains. The Town secured funding for both phases of the project, and took the steps required to raise the water rates to cover the infrastructure improvement loans.

Dualator® VI Customized Design

The two water plants (East Street, and Crescent Street) are designed using three Tonka Dualator® VI groundwater package plants. The Dualator® unique design features include a forced draft aerator for iron oxidation, CO2 and radon removal, followed by a 30 minute detention tank for complete oxidation of the iron

and manganese. After detention the water flows by gravity into a four-cell greensand filter. Each of the three Dualator® VI units is self backwashing, allowing the well pumps to continue at design capacity even during the backwash process.

Another satisfied customer

Once online, the city was happy to turn off the old lime feeding system they had been using for years for pH control, eliminating the maintenance of the equipment and pipe lines that go hand in hand with this system.

The Dualator® VI has a long and proven track record across the country. Tonka is proud to have the Town of East Bridgewater as one more satisfied Dualator® VI customer. ♦

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We'd love to see you at the Tonka booth at AWWA in San Diego - #2733

Organics Removal Plant Doubles in Size

By Alan Schneider

The Pembroke Pines, FL water treatment facility recently underwent a major expansion to increase the capacity of their water treatment facility. Included with this expansion was the addition of four Tonka 12' diameter anion exchange vessels for Natural Organic Matter (NOM) removal. The original 6 MGD facility has been online since 1999, and the expansion brings the capacity up to 12 MGD.

Ion Exchange for Organics Removal

NOM in water supplies, when chlorinated, can form numerous types of disinfection byproducts (DBPs). Of these, trihalomethanes (THMs) and



haloacetic acids (HAAs) are regulated. A majority of organic compounds have an anionic charge, allowing them to be removed by ion exchange before disinfection, thus reducing the formation of DBPs. The macroporous resin used in the Tonka system also provides the ability to remove uncharged organic compounds. Tonka's extensive experience has made us the unquestioned leader in the field of NOM removal using packed bed ion exchange.

Ease of Expansion

Tonka worked with the city's engineer, Calvin & Giordano, providing drawings and technical support to make the expansion as smooth as possible. The multiple-vessel design of the Tonka system provides the ability to easily expand capacity. The facility was able to use the existing brine delivery and disposal system, and the control system was upgraded and expanded to accommodate the additional vessels. This design also provides flexibility in operation, allowing one or more vessels to be taken offline while the remainder are in service.

Water Disposal Savings

The Pembroke Pines addition included a conductivity system that



monitors the regeneration cycle. This increases overall efficiency by shortening rinse cycles and allows the facility to separate high and low conductivity wastes for disposal.

Important Water Supply

Water resources in Florida are in short supply, and the expansion at Pembroke Pines allows the City to provide additional high quality water in a cost-efficient manner. The proven design of their Tonka system will allow continued use of this valuable resource well into the future. ♦



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- After severe dislocation of financial markets late last year, markets for quality municipal debt instruments are returning to "normal."
- The inventory of unsold homes has peaked and started to decline.
- The federal government is pumping money into banks and the mortgage markets to restore liquidity and stimulate economic activity.

- Recent gains in stock prices suggest the worst is behind us.

Equally importantly, the flood of money being printed to stimulate the economy and create liquidity will ultimately be reflected in inflation. When increased money supply chases static resources, inflation is sure to follow.

2009 will likely represent the lowest costs for building new water treatment capacity that we will see for many years

to come. We know that regulatory requirements will continue to get more stringent and water increasingly will be in short supply.

In the future will we look back and say "What were we thinking back in '09 when we didn't take advantage of the low cost environment?" It's time to look forward to opportunities instead of backwards to the problems of the past. ♦

Outside the Box

By Rick Mann

A northern Michigan oil and gas facility needed a long term cost efficient solution to treating water with high levels of BTEX (benzene, toluene ethylbenzene and xylene), iron and manganese. The engineers at Gosling Czubak worked with Tonka to provide a treatment solution that would efficiently treat the BTEX as well as the iron and manganese with minimal operator time at the site.

All parties involved realized that sending over 70 pounds per day of iron and manganese onto a packed tower stripper was not feasible; advanced pretreatment equipment would be required.

Tonka's UTS-P

Gosling Czubak selected a Tonka UTS-P treatment plant to handle the iron and manganese, and a Tonka stripping tower to remove the BTEX from the water. GAC was used to treat the stripper off-gas.

The 11' wide x 10' high x 43' long steel UTS-P consists of three main components – flocculation, plate settling and filters. Due to high influent solids it was imperative to closely manage sludge within the settling compartment and deliver minimal solids to filtration. Tonka utilized stainless steel plate separators over an automated telescoping sludge removal system for this purpose. The UTS-P underwent further modification to capture BTEX emissions that occur through passive transfer and potential transfer during the filter backwash step. The filter uses the Simul-Wash™ backwash process utilizing sustained air and water for the majority of the backwash duration. With the presence of BTEX in the water, this aggressive backwash process had the potential of releasing volatile organic compounds. The Tonka UTS-P design incorporated removable cover panels as an enclosed capture zone, while a blower was used to create a negative pressure within the UTS-P. This captured air stream is treated using granular activated carbon prior to release.

The engineers at Gosling Czubak asked for and received a system that would maintain 24 hour pumping, without having to add redundant filters and cost to the system. Tonka engineered the UTS-P to accomplish this by creating a filter bypass system, collecting settled water and redirecting it to a backwash clearwell during backwash events. ●



The UTS-P has done a tremendous job of treating the water prior to stripping; the filter backwashes only 15 minutes a day with effluent iron and manganese at non detect levels.

Maintenance Tip - Get a Head Start on Your Maintenance Schedule

By Paul Richert

As winter slowly loses its grasp, we think of spring as a time of cleaning house and getting organized. This provides a great opportunity to update your maintenance schedule to keep your WTP running in tip top shape for now and many years to come.



Items your plan should include:

- Regularly drain the moisture filter at the solenoid panel
- Verify the settings and check the diffuser element in your Pressure Aerator
- Maintain your Air Compressor – change the oil, check the belts for tension and wear, change the filters
- Maintain your Air Wash Blower – change the oil, check the belts for tension and wear, check the PRV for operation
- Visually check your Air Scour pattern – open the manways and look for an even pattern
- Visually check your Simul-Wash™ Trough(s) for accumulated solids or missing bolts
- Take a core sample and measure the depth of your media


A little maintenance now can save you time and money in the future.

In the Tonka O&M manual you will find all the information you need to establish a complete maintenance schedule for all of your Tonka-supplied equipment.

If you have questions about preventative maintenance procedures, or if you're looking for a replacement part, call our customer service number at 1-800-530-1887. ♦

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The logo for Tonka Water Treatment Systems is a blue teardrop shape. Inside the teardrop, the word "TONKA" is written in large, bold, white letters. Below "TONKA", the words "WATER TREATMENT SYSTEMS" are written in smaller, white, all-caps letters, arranged in a circular pattern.