FACILITY AND SYSTEM UPGRADES

By Joe Redmond

Over the past few years, the Federal and State Governments have finally realized that "out of sight, out of mind" is not a good way of thinking about our underground infrastructure. Many of our systems are well over 60 plus years old. Water and sewer pipes are failing, streams are being contaminated, and drinking water is being wasted. In some cases, recent storms have washed silt into surface waters, eroded away pipe cover at creek crossings, and have caused spillways to deteriorate. Wellhouses have been flooded along with entire wastewater facilities.

In my time as a water system operations specialist, I have worked through many upgrade projects. Hurricane Irene and Tropical Storm Lee devastated our area. Our reservoir dams were overtopped, and water mains were exposed. Our wastewater plant was flooded. Generators and electrical components were destroyed. This was about the time that our governments really opened their eyes.

Since that fateful day in August of 2011, grant money has started to become available to water and wastewater systems at a better rate. Our system was awarded a 3.6-million-dollar grant to rehab our reservoirs. The spillways were rebuilt, and auxiliary spillways were added. Water mains were replaced, and the wastewater plant was repaired. Since that day, other grants became available, and we jumped on the applications. We have been able to replace many underground utilities throughout the entire village.

Not every project was engineered perfectly. This is often the case and is not entirely the engineer's fault. There are often system components or water mains that no one ever knew were there or maps were wrong. Change orders happen. Things get missed. This is where you can be an asset to your municipality and the agency working for you. Think about this, you are going to be the one using this new equipment and you will be the one servicing it. That means, you should have some input on the design drawings. I have seen things on drawings like, no under drains on lagoons, pumps and motors placed where nobody can get to them for servicing, and buildings built around storage tanks that someday will have to be replaced. In one situation, a new water main was to be installed along the road right below a cast iron main that crossed through yards. The old cast iron main was to be left in service. Is that necessary? Another example was replacing an intake structure and installing new flaps but leaving the rotted ropes intact to operate them. Oversizing water mains can lead to water quality issues, and you will be the operations specialist out there flowing water on the ground to obtain a chlorine residual. All these things and more can be addressed as soon as you look at the drawings.

Don't be afraid to speak up if you see something that doesn't look correct. Make sure you check with chemical suppliers and find out the required storage tank size for bulk deliveries. If your plant is going to utilize 2-inch fill ports, 2- inch fill lines, and a 150-gallon bulk tank, the company may refuse to fill it. The simple reason is that the truck's pump flows at 80 gallons per minute. Would you want to fill this tank and have room to blow air through the line if you were the driver?

Having experienced operations specialists is so important, especially if there will be replacement work or expansions to a system. Most engineering companies and construction contractors will value your input when these projects begin. Hopefully the Mayors and Boards will include you in the process as well. It would be in their best interest to do so. Making an upgrade that makes work harder or in some cases impossible can end up costing more money later. Keep on the municipality and encourage them to apply for grants. Stress the importance of repairing and replacing old components.

Thank you for keeping these systems in operation. In most cases, the system was put there long before you were a thought, and it will probably be there long after you leave. Let's make it better for the next generation of operations specialists, continuing to provide...Quality on Tap!

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