COVID-19's Effect on the Wastewater Industry

Learn tips on remote monitoring and social distancing while navigating novel coronavirus issues.

ALECIA ARCHIBALD | *Pumps & Systems*

Today, we introduce a new department to *Pumps & Systems*. Submersible Solutions will—much like Sealing Sense and HI Pump FAQs—be provided by a trusted industry trade group, the Submersible Wastewater Pump Association (SWPA). The articles will discuss challenges facing the wastewater industry, and provide solutions and technical advice about how to operate equipment more efficiently. This first article is an interview with member Justin Hovinen of EBARA Pumps.

Please tell us a little about yourself.

I lead EBARA's sales team in the central United States. (EBARA is a large pump company with particular focus on solids handling pumps that can pass difficult solids.) I've been in the industry for about 10 years now.

Can you tell us about SWPA's training opportunities?

SWPA was founded in 1976 and its primary focus is on industry guidelines, education and promotion of submersible wastewater pumps. SWPA's training opportunities are topical now more than ever with the coronavirus. We have an online training resource center at swpa.org. You can get CEUs there while you are working from home. And, we have an annual training in March in Chicago.

We want to talk some about how COVID-19 is impacting the wastewater industry. First, can we get a little background? Can you tell us some of the changes in the industry over the last 10 to 20 years?

> We are seeing a lot of evidence that suggests there has been more clogging since the coronavirus started.

The big issue began in the mid-1990s with a reduction of volume in our water system. The Energy Policy Act of 1992 basically cut toilet flush volumes by half and then instituted low-flow shower heads.

Two really good things, conserving a valuable resource, water. However, there are consequences to that. Then we get up into the 2000s, and these nonwoven sheet goods (wipes) start to gain traction.

When nonflushable wipes entered the market, how did that change the wastewater pumping industry?

A lot of times these are marketed as "flushable" wipes. And they can be flushed, but they end up in the landfills.

Then, we have FOG (fats, oils and grease) to the collection system, which is exactly the type of liquid that the wipes are designed to attract in your kitchen or bathroom. They do the same thing in the collection system, turning it all into what is commonly called a fatberg.

So the biggest impact on the wastewater industry is that pumps—the old design of pumps—were less effective. People at every point of design and operation started trying to figure out how to handle these solids. What type of pump are we using? Do we need to increase velocity? Do we need other equipment?

What are some of the solutions that have been created to deal with the problems?

The first solution is to screen this type of material out of the collection systems. You can do that in the lift station with incoming trash baskets, which are typically undersized. They really do need to be maintained and emptied quite often. Or, you can screen it out farther down in the wastewater treatment plant. The second option is to pump it. Pass that nonwoven sheet right through the pump, which is the most hydraulically efficient way to move the solid. This is limited by the size of the opening in the pump. The third option would be a combination of pumping and reducing the size of the solid using a chopper or grinder pump.

Since the pandemic has spread across the U.S., how has it impacted our wastewater treatment facilities? With people staying home, along with the use of antibacterial wipes, has it increased clogs? Has it changed the way professionals are dealing with clogging?

Yes. It has absolutely. Everyone is at home; everyone is cleaning a lot more. We are seeing a lot of evidence that suggests there has been more clogging since the coronavirus started. Mayors are

pleading with their constituents to only flush toilet paper. In the Milwaukee area, for instance, plumbers have seen a 40 percent increase in calls. And it's not just the United States. But also, we have been preparing for this for the last 15 to 20 years. Many of the plants are handling it well because of having good practices and procedures and the correct equipment in place.

What about social distancing? How does that affect work in plants?

Wastewater treatment plants are very essential. They are needed for dealing with emergencies and urgent matters. They are observing social distancing. One plant we deal with normally has a crew of six operators. They have split that into two crews of three so there is space to comply with social distancing. They have to work in alternating shifts. They are not congregating in the maintenance facilities. The other advantage of operating this way is that if one person gets sick, they still have a crew of three that can continue working. These are ways of mitigating risk. We have a lot of wastewater personnel who have had to take leave because they have children who are not in school. So, there are a lot of commonalities with other sectors.

Is remote monitoring playing a bigger role?

Remote monitoring is playing a huge role. We are dealing with a reduced labor force, so having analytics that tell you when there might be a clog or failure is super critical. It gives insight into where that next problem may occur. With all the information, you are able to plan and prioritize.

WEF (the Water Environment Federation) has convened a panel to deal with safety for wastewater treatment workers. What are the concerns here?

The concerns are how are they going to protect wastewater operators. It's great to see they are taking a proactive approach. It's not just applicable to the coronavirus outbreak. We want to make sure we have the proper procedures in place to keep wastewater operations up and going. It is a huge public health risk if wastewater operations were to fail or close.

To hear the full interview with Hovinen, visit pumpsandsystems.com/podcasts. ■

Submersible Solutions is produced by the Submersible Wastewater Pump Association to inform and educate in the design and operation of submersible wastewater pumping systems. For more information, visit pumpsandsystems.com/swpa.

Alecia Archibald is editor in chief of *Pumps & Systems* magazine. She may be reached at aarchibald@cahabamedia.com.