



Marking World Water Day with an Interview with Drinking Water Treatment Professionals

By the Water Quality & Health Council

Every year on March 22, the United Nations observes World Water Day with a unique theme. Intrigued with this year's "Water and Jobs" theme, we conducted a telephone interview with four water treatment professionals employed by the Louisville Water Company. The over 160-year old company treats Ohio River water and supplies it to more than 800,000 consumers in the city of Louisville and surrounding locations.

This interview explores the perspectives of the unseen people employed miles "up faucet" from consumers' taps who ensure that safe water is available 24/7. We spoke with Dr. Jack Wang, Director of Water Quality Operations, Dr. Rengao Song, Water Quality Manager, Larry Bryant, Plant Operations, and Cindy Crawford, Plant Operator.



Louisville Water treatment plant on the Ohio River, Louisville, Kentucky [photo courtesy of Louisville Water]

1. What is it like to know that you play a part in helping to keep hundreds of thousands of people supplied with safe drinking water on a daily basis?

According to Cindy, earning her Class 4 license required passing the hardest test she ever took. As Plant Operator, Cindy feels honored to be in the water treatment business. Rengao declared his job as Water Quality Manager both challenging and rewarding. As he notes, there is no recalling the water once it leaves the treatment facility. Larry, in charge of Plant Operations, has worked in other sectors selling discretionary consumer products, but stressed that water is different because everyone needs it and it must be a 100% quality product all the time. Jack believes there is nothing more rewarding than knowing half a million people rely on your work, but it can also keep you up at night!

2. What prompted you to seek employment at a water treatment facility?

The respondents were attracted to Louisville Water by its sterling reputation as a great place to work. Rengao and Jack said they are first generation Chinese-Americans who earned their doctorates and then looked for work in the environmental engineering field. Decades after starting in the water treatment field, they reflect on the fact that they are honored to have made a positive impact not only in Louisville, but in neighboring communities as well, as they share their expertise regionally.

3. What was your biggest revelation about this job?

Jack cited the pressure of the job and the high level of responsibility. After joining Louisville Water, he came to understand that his job is not only about supplying pure water, but that water impacts public health significantly. Rengao stressed responsibility too, and the need for “proper actions all the time.” Cindy, who, as Lead Operator, is situated on the front line of the water treatment process, observes the big water treatment picture on a daily basis. She has access to computer data that allow her to make immediate changes to treatment based on water quality trends approaching from upstream.

4. What are the biggest challenges in working at a water treatment facility?

Jack noted the challenge of staying focused, progressive and innovative. He said it is important to fight complacency, an issue that had negative consequences in Flint, Michigan, for example. He spoke of the Louisville Water culture of continuous improvement, and a keen awareness of areas in need of improvement. Staffing is a challenge too, according to Cindy, who said, “The swing shift is not for everyone.” The swing shift consists of 12-hour days, 6 am – 6 pm for 28 days, followed by 28 days of 6 pm – 6 am shifts¹. Rengao noted challenges in keeping up with water quality regulations and ensuring that the facility is always “emergency-ready.” There are also infrastructure needs and a need to prepare the next generation of water treatment professionals—succession planning—as it is known. Larry reminds us that “the water treatment process is never off.” There is a need for people with good attention to detail who can work long and odd hours—a schedule that certainly interferes with family life.

5. What changes in water treatment have you seen over the years?

Change is constant in water treatment, according to Jack. As new regulations are put in place, changes to treatment are needed. Rengao described a substantial reduction in Louisville water turbidity over the years, from 0.3 ntu² to 0.05 ntu, as an example of steady improvement. Jack discussed the public’s interest in point-of-use and point-of-entry home treatment devices. Louisville Water’s website contains tips for consumers on these devices, which have become

¹ The swing shift entails working three 12 hour shifts one week, followed by four 12 hour shifts the next week.

² An “ntu” is a nephelometric turbidity unit, which is a measure of water’s turbidity or cloudiness.

more popular in recent years. Additionally, the modern water consumer is more savvy than ever, thanks to online information. The public equates safe drinking water with public health, and Louisville Water works hard to achieve good public communication.

If the four individuals we spoke with at Louisville Water are any indication of the level of devotion and professionalism of the majority of water treatment employees across the US, we are all in very good hands indeed.

Happy World Water Day to water treatment officials everywhere. Thank you for all you do!