Happy November! The FSAWWA 2021 Fall Conference will be held at the end of the month, and we are planning to be live! Vendor booths and tabletops sold out in September and a full lineup of technical sessions is planned for Monday through Wednesday morning. The conference will have COVID-19 protocols in place because we just can’t shake the ‘vid. It’s part of the “new normal,” which is our conference theme for this year.

What’s the New Normal for Society?

So, let’s talk about what the new normal means. Let’s start with the economy and work our way to those looming threats we may have to deal with in the coming year. I will use COVID as the start of the new normal, but I doubt it will be the entire answer.

Those of you who have read my blogs, or my infrastructure management book, know that I believe that those in our industry need to understand how the economy works, and how local and national trends impact our livelihood, as we saw after the financial system meltdown in 2008. Our revenues and expenditures were impacted, capital projects got delayed, deferred maintenance needs increased (and are still not resolved), new building construction stopped, growth halted (and contraction set in), and people lost jobs. To make matters worse, our water and sewer funds became the “solution” for lost tax revenues.

Economic disruption on the national (and world) stage impacts what we do, yet we are expected to keep on doing it (i.e., provide safe water and wastewater services to our customers). We also had elected officials trying to “help” residents by lowering water rates, which further eroded needed revenues. Some utilities were still in recovery mode after 2008—trying to get the general fund out of the utility (and maybe pay it back!) when 2020 hit.

A new economic challenge was presented by COVID. In many states the economy shut down and schools closed in an attempt to slow the spread of the virus, while we endeavored to develop vaccines and figure out the best way to address those who became critically ill.

There were lessons learned during the flu epidemic in 1918 and subsequent pandemics that were mostly controlled, like Ebola and H1N1, through masks, social distancing, rapid vaccine production, and keeping kids home from school.

When COVID hit, many changes happened:

- Restaurants moved from in-room dining to takeout, so they no longer needed wait staff and dishwashers.
- Online shopping became the norm for many people and retail service staff was not retained.
- Technology meant there was no need to travel for so many meetings. We realized that travel creates a huge amount of unproductive time, keeping us from getting things done, but airlines, hotels, in-person restaurants, bars, and other services withered due to lack of business traveling.
- Whole industries, like banking, engineering, legal, accounting, and similar professions, were done remotely, which means you don’t need offices or the office staff.
- Availability of people increased as a result of changes in cellphone and online meeting patterns, which meant, in some cases, productivity soared, while in other cases people could not escape the interruptions to be productive.
- Remote learning for children became common, which altered work patterns and the need for accommodations for parents.
- Home offices were built and houses were fixed up, so construction costs increased due to competition for products and supply-chain challenges.

The upside to all of this is that many companies stayed in business and many people kept on working, but there was a downside. Many of the support-staff positions may never return—many stores in retail malls are vacant, restaurants have fewer seats, business travel may remain depressed, and childcare needs may prevent workers from returning to their old jobs. Many of these lost jobs are lower-wage positions, compounding the economic challenges for many. This new age of uncertainty will fundamentally change some communities, creating a need to retrain workers to do new jobs—but what are the new jobs?

For those jobs that did return, workers are sending a message that they will go back to work when they feel safe and better-compensated. Kossek and Perrigino (2016) identified a series of job-security challenges affecting many workers:

- The rise of job insecurity and precarious work.
- The intensification of work.
- The increased use of technology and its impact on currency of skills, how work gets completed, when it gets completed, etc.
- The blurring of work/nonwork boundaries.
- Work/life conflicts.

Being available around the clock exacerbated the immediate-gratification challenge that had been growing in the working world, increasing work stress. The challenges associated with not interacting with other people have created a host of mental and emotional challenges: loneliness,
isolation, focus issues, and depression, among others.

During the pandemic, Panchal et al. (2021) noted that four in 10 adults in the United States have reported symptoms of anxiety or depressive disorder, a share that has been largely consistent, up from one in 10 adults who reported these symptoms before the pandemic. Kearney et al. (2021) found that over 40 percent of adults say the coronavirus has had a negative impact on their mental health and that “school closures and lack of childcare had an even larger impact on parents with children.”

Negative impacts on workers’ mental health and well-being include “difficulty sleeping (36 percent) or eating (32 percent), increases in alcohol consumption or substance abuse (12 percent), and worsening chronic conditions (12 percent) due to worry and stress over the coronavirus.” Because emotional trauma, like post-traumatic stress disorder (PTSD), normally lasts longer than the event, these mental and emotional challenges will impact us over the next few years, creating a whole host of stress-induced syndromes.

Added to this is an increase in attention deficit disorder in kids (too little supervision and too many distractions), and many kids seem to have lost most of a year of school. Economic disruption extends far beyond just money—it can fundamentally change society. But other issues were exposed as well.

**What’s the New Normal for the Water Industry?**

So how does all of this affect utilities? First, there’s the economics. More remote work and shopping could mean less commercial building, which impacts the tax base. Less demand for commercial office space and retail space may cause current commercial values to fall, compounding the tax-base issue, which means politicians will look to water and sewer funds to balance general-fund budgets, just like they did after 2008.

Demands will be altered, affecting treatment, supply, and revenues. The commercial sector often drives per capita water use, so less commercial activity could cause reductions in water use by current employment sectors (meaning less revenue). Bedroom communities may have higher demands, since people are home more, creating a need to find more water and wastewater treatment capacity there. Both will impact spending on deferred maintenance needs and may alter the current distribution of services.

Work will change. Many employees will ask for and expect remote work options. Demands for flexible hours, accommodations for home childcare, benefits, and less stress on the job may be required to secure these workers as well. These will be job benefits that will need to be available going forward to attract and retain workers. Yet, while some jobs can be done remotely with little disruption, those done by field workers and operators cannot.

Like construction, those jobs require people to be at the worksite. Since the economy requires safe water and sewer services, we should consider reclassifying our operators and field staff as essential workers, just like police and firefighters, because we, like they, provide public health, safety, and welfare services to the community.

The competition for products that have supply-chain challenges is apparent. Disruptions exposed the fact that the supply chain for products is far weaker than we thought. Getting simple things, like medicine, toilet paper, disinfectants, etc., could easily be disrupted by world economic events. Because American industries outsource so much to other countries to take advantage of low labor costs and keep prices down, the economy is subject to more disruptions.

The differences across the world with COVID, business openings and closings, and transportation have slowed the economic recovery because components are not readily available in

*Continued on page 26*
Continued from page 25

some sectors. For example, the lack of computer chips from Taiwan and China has impacted automobile manufacturing in the U.S. Those F150s (and others as well) are sitting in Detroit waiting of chips, increasing costs and delaying arrival. Many utilities rely on work trucks for their operations. Supply chains affect chemical use as well. Utilities have shut down ozone systems because the oxygen is needed for hospital ventilators. Other chemical costs have increased due to supply-chain and demand factors. The ability to react to price changes in current budgets demonstrates the lack of “nimbleness” the elected officials have in reacting to these challenges, something we all knew. That needs to change if we are to secure the products and services we need. Lumber costs went up by a factor of five, and the price of polyvinyl chloride (PVC) materials doubled in three months. Both have retreated recently, but not to pre-COVID levels.

As we have already seen, some workers, fed up with the stress on the job, may figure they have invested well enough to leave the job market permanently—there may be as many as 11 million workers who made this choice. With them went a huge amount of institutional knowledge. Utilities are not immune to this worker shortage. Paying more to get field employees who will work onsite in an environment where they can be exposed to COVID will be an enduring challenge for us. And as for knowledge capture—well, we need to start using computer tools to collect that knowledge before it’s permanently lost. Utilities are among the most at risk to this knowledge loss. Geographic information systems (GIS) and other tools, when integrated with field staff, can provide engineers and managers with the data needed to make better decisions. Top-down approaches may be less valuable.

So, the immediate challenges are many, but it takes little to see the next set of challenges. Other crises affect our industry, and our ability to meet the challenges presented is critical to our success.

Climate change, for one, is going to alter the water balance. Too much, too little, wrong time, too much uncertainty—these factors are already driving change to our perceptions of water supplies (potable reuse is on the table now!). The sustainability of water supplies, and their reliability, are going to drive options like potable reuse when the population continues to grow and climate is a supply-disruption factor.

Data continue to indicate that we are not spending enough to catch up with the deferred maintenance obligations. More problematic is the way to calculate these involved replacement values, which are climbing rapidly. So, another major challenge it to figure out your assets and how far behind you currently are.

Then there is the need to prioritize infrastructure repairs and replacement to reduce risk (Bloetscher, 2019). I’m currently working on a model for this that is simple to implement, but some costs are staggering and will require major changes in rates and investments.

With the need to build sustainable infrastructure is the need to be able to sustain finances, build strong reserves, bank money for large expenses, and perform ongoing replacement of pipelines. Bond issues create a need to raise rates, so paying as you go can help, but most rates are not what they need to be to create the sustainable finances, and elected officials pushing back to raising rates is significant in many communities.

Finally, there’s that people problem. The lack of candidates for operations and field jobs is troubling. A major discussion point at our recent FSAWWA past chairs forum is that low local government pay scales may be a barrier to these jobs. Maybe of our operations people need to get paid like the essential frontline workers they are.

Already local governments have been priced out of the engineering graduate market. The students are getting offers that average nearly $70,000 per year, plus benefits. Many government
pay scales for engineers start in the high $40,000s and low $50,000s, so there is no chance to get high-quality candidates at these pay scales. Pay-scale adjustments indicate that costs will rise, which will require local entities to adjust and adapt, but costs for consultants will also increase in line with the laws of supply and demand for these employees.

There are starting salaries of $25,000 per year for operators and field jobs, which is below the poverty level in many communities. Operator and field staff salaries are probably far off of what is needed, so people will only come to work “when they feel safe and better-compensated.” We may need to pay a lot more to attract and keep new people. Comparing ourselves to other utilities gives us bad feedback; we need to look at similar skills in other industries, like construction.

Once people are found to do the work, there is a need to keep training them, retaining them, and creating a positive environment. We need to bring in more of the next generation of people to the industry, which means overcoming many barriers.

While pay and flexibility are issues, they are not the only ones. A recent survey of the water industry noted that the biggest issue identified by both seasoned workers and young professionals (YPs) was the existence and perception of too much politics in the industry, from both local and state governments. The YPs saw this as a bigger issue than the non-YPs (see Figure 1).

People do not like to work in difficult environments. There are agencies where the environment is just too toxic, with lack of trust, authoritarianism, competition, favoritism, poor communication, too many politics, etc. Retaining good people is impossible in these situations (good people are the first to leave). It means we need to build good leadership across the industry that will improve the workplace and advocate for the public.

It’s hard to define good leadership because it comes in many forms and is often specific to the approach to a situation. A football quarterback, who is a great leader on the field, might not be the best choice to lead the reorganization of a major corporation (Bloetscher, 2019). Both positions require leadership, but the skill sets required for the positions are situational. The same survey I mentioned indicated that the YPs saw leadership within professionals more than non-YPs. No other category more greatly differed between groups. Interestingly, neither group saw leadership at the executive or political level (see Figure 2).

So, let’s consider COVID as a portent of the future challenges we will face—it was the trial run. It has identified certain issues that need to be dealt with now. It told us we are too slow to react and too slow to communicate the correct message. Leadership, judgment, consideration, accommodations, and embracing our team are needed in the new normal. This is part of our public health, safety, and welfare obligations.

References