During the COVID-19 pandemic, many water system operators are being directed to avoid entering private homes at all costs. Many small businesses have been forced to close their doors to customers as well, making the required sampling for the drinking water system nearly impossible. The Kansas Department of Health and Environment (KDHE) recently released a guidance document for water sampling during the coronavirus shutdown. It is summarized in the side bar. The pandemic has many operators searching for a better way to collect the required samples. Many manufacturers offer dedicated sampling stations that can tap directly into a water main. There are also special meter setters that include a port that samples can be drawn from. Unfortunately for many small systems, the price tag on these units can be prohibitive, especially if multiple units are ordered to handle the many different sampling locations required.

But near El Dorado, Kansas, Rural Water District No. 1 and No 7 back-up Operator Gerald Watson has created a low-cost, easy to install solution to the problem of entering homes to sample. The ‘GDW Water Sampler’ is installed on the existing meter setter. The unit is contained entirely in the meter pit, with no danger of freezing or being mowed off by a homeowner. Watson, who began operating full-time more than 20 years ago, was inspired by the saddle tap on the water line leading to his refrigerator.

The unit works by tapping into the meter setter on the public water supply side of the meter with a self-piercing needle valve, allowing an operator to sample the water using the connected six-foot braided hose, complete with a ball valve to shut off the flow, and a curved sample spout and cap to keep the end of the sampler clean. The unit includes a check valve to prevent water from flowing back into the water line after use. Gerald builds the units in his

Device patent drawing.

The sampling device is made from high quality brass and stainless parts.
basement workshop, which includes the dies and press needed to fabricate the saddles.

“I had to find a way to build that part because I couldn’t buy anything that would hold up. I tried to use those saddle taps from the hardware store, but they just couldn’t handle the meter can’s environment,” says Watson. So, he began to experiment with other, more robust materials. He uses high quality stainless steel and brass in order for the samplers to withstand the conditions.

Ten of the units are currently in use in Butler County. Butler RWD 3 operator Jimmy Davis is a fan of the GDW Water Sampler.

“It’s a great device; I don’t have to enter the customer’s home, mess with all of that,” he says when asked about using the units. When asked specifically about monthly coliform sampling he said he has not had a coliform positive test due to a sampler being installed. “It stays pretty clean with the cap on it.”

Dedicated sampling stations are approved for use by the EPA and allowed for use by KDHE. GDW Water Samplers sell for $165. Gerald Watson has received a US Patent on the unit and he has secured full product liability insurance. For more information, call Gerald at 316-322-5665 or email him at gwatson1936@gmail.com.

**KDHE Guidance for Revised Total Coliform Rule (RTCR) Sampling**

- Public water systems must continue to take all required samples during the COVID-19 pandemic. If a system does not take samples, they will be subject to a Boil Water Advisory just like normal.
- Public water systems should use sample sites listed on RTCR sampling plans. If a sample site is unavailable due to the pandemic, samplers are allowed to use a temporary sampling location. If a temporary location is used, samplers need to write on the paperwork that an alternative site was used due to COVID-19.
- KDWA recommends either moving to another site already on the RTCR sample plan or adding the new site to the sample plan (only allowed for RTCR sampling, not disinfection byproducts or lead and copper).
- KDHE guidance does suggest allowing a homeowner to take the RTCR sample for the system, KRWA strongly discourages this option. Without proper training and oversight a homeowner could easily contaminate a sample.
- KDHE guidance also suggests taking samples from outdoor spigots. If a water system decides to pursue this option, KDHE and KRWA both recommend the sampler adequately disinfect the outdoor spigot. The sampler can use normal strength Isopropyl rubbing alcohol (70 percent or greater). Wet the spigot with the solution, let sit for at least one (1) minute, then adequately flush the tap before sampling. A solution of household bleach can also be used but the contact time on the spigot should be increased to at least five (5) minutes.

**KDHE Guidance for Disinfection Byproducts (DBP) Sampling**

- If a system is unable to access one of the normal DBP sample sites due to COVID-19, KDHE will temporarily allow for relocation of sample sites.
- Unlike the RTCR sampling plan, a system MAY NOT change an approved DBP sampling plan by adding or deleting sampling sites. If a sampler needs to change sampling sites because of COVID-19, KDHE recommends finding an alternative site as close to the approved site as possible, preferably on the same water main.
- Sampler must document the new sample site on the required paperwork and write on the paperwork that an alternative site was used due to COVID-19.

Butler RWD 3 Operator Jimmy Davis created this accessory storage and holding device to help collect samples using the GDW Sampler.