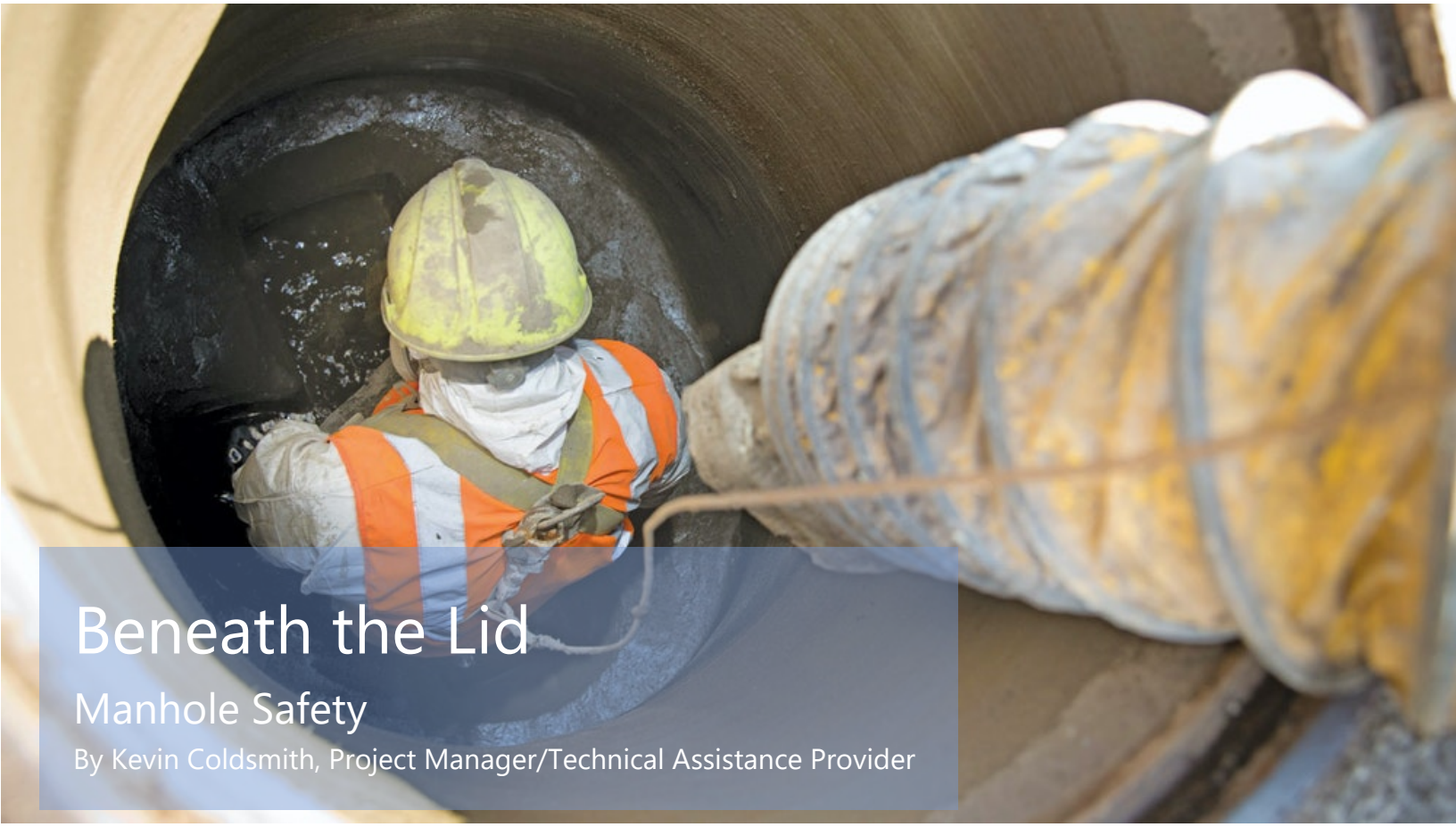

Beneath the Lid

Manhole Safety

By Kevin Coldsmith, Project Manager/Technical Assistance Provider

No matter how safety-conscious you are, it only takes one lapse, one mistake, one shortcut to change everything. That's the thing about safety measures: they only keep you safe if you follow them 100 percent of the time. Accidents are often the result of shortcuts or failing to take simple steps to protect yourself, in an effort to try to save a little time. The industry has many stories of those who have tried to save a few minutes and ended up losing the rest of their years. Safety should never have shortcuts, no matter how much time you *could* save. Safety is a topic constantly taught, discussed, and hopefully practiced. However, it's worth mentioning again. Putting a little time and emphasis on safety could save a life. There are stories of people who would jump into a maintenance hole to do the work, and if they started feeling lightheaded, they'd jump out.

Before becoming a Technical Assistance Provider, I worked for a city with around 14,000 in population in the water and wastewater departments for eight years. I primarily worked with wastewater and the collection system. I can personally say that I have opened every manhole within the city's system. I have been in many of them and have seen many shortcuts taken. Not to elaborate on that, there is no excuse for not utilizing proper safety equipment and personal protective equipment (PPE). These aren't situations where you learn from your mistakes; they're situations where you can get injured or even die from mistakes made. The goal is to make sure everyone comes home safely.

Hydrogen Sulfide (H2S) can take its toll before you even know what's happening. You probably know that the gas has the distinct smell of rotten eggs, an obvious warning sign. But as it reaches higher concentrations, H2S paralyzes the olfactory nerve. You won't smell it. You just

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collapse and die. There is never an acceptable excuse to enter a sewer without a proper gas monitor or enter a confined space unattended or without the required gear.

Toxic gases are certainly not the only hazard utility crews encounter in their maintenance work. Primary types of disease-causing organisms that can affect humans thrive in raw sewage — bacteria, protozoa, viruses, and parasitic worms. PPE can help ensure that these contaminants are kept off of the human body and keep the worker free from scrapes, cuts, scratches, and other bodily harm. Employers should be mindful about supplying the proper PPE, as well as enforcing the use of it. Some of the most common equipment used to promote overall safety are tripods, safety harnesses, rescue ropes, an approved breathing apparatus, protective clothing, and safety helmets. These pieces should always be evaluated carefully by the safety inspector before each job. Gas detectors should be tested and calibrated before each use. A critical component of safety gear is a ventilation blower that can help to supply fresh air to the manhole to ensure that the air inside stays safe for workers. Any generators releasing toxic fumes near the area should be removed from the work site as soon as possible.

Other dangers lurk below. Therefore, safety measures only work if you follow them all the time. Accidents are often the result of shortcuts and failure to follow essential steps. All too often, you hear of another life lost. When the proper training meets the right safety equipment, those managing and working in a sewer area have a decreased risk of dealing with accidents, injuries, and personal injury lawsuits. Always use your safety equipment, follow procedures and be aware of the environment in these confined spaces. Do not become a victim to the hazards that lie beneath the lid.