

Underground utility location **made easy**



Schonstedt's XTpc is a small, pistol-gripped locator that can be clipped to a holster and extended to a full 26 inches when in use. Photos: Schonstedt Instrument Co.

Buried infrastructure (such as gas, phone, cable, electric, water, and sewer) is critical to all public works departments; it's a form of buried treasure. And, like buried treasure, underground pipe and cable can be hard to find. Inadequate or unavailable mapping makes utility location a pesky chore. It's important, though, since damaged lines are expensive to repair—sometimes even life-threatening.

Faced with this high-liability scenario, many departments outsource locating, but such work is expensive and sometimes casually performed. It's hard to find low-wage employees who are passionate about infrastructure.

A new breed of utility-locating equipment from Schonstedt Instrument Co., Kear-

neysville, W.Va., is changing the equation for many departments. Compact, sensitive, sturdy, and intuitive locators mean that even departments with only an occasional need for locating can easily get into the game, and departments that have been locating all along have better tools to turn to.

UPGRADE REQUIRES LOCATING

The Dunkard Valley Joint Municipal Authority in Greensboro, Pa., has water and sewer lines dating back to 1945, with very little mapping. The authority had never done its own locating, but in 2004 Frank Boswell, chief of plant operation and general maintenance, was poised to undertake a major sewer upgrade and realized that utility location had to be a priority. His search for the right locator wasn't formal or intensive—he read a few flyers—but he is satisfied with the Schonstedt XTpc he purchased.

The XTpc is a small, pistol-gripped locator that can be clipped to a holster

and extended to a full 26 inches when in use. Boswell and his coworkers had a brief training session and never looked back. The locator is small enough to keep in the truck and gets used at least weekly. To cope with the tangle of large-diameter iron pipe and valve boxes, the authority also bought an XT magnetic locator.

Has the combination saved money? "Oh, my, yes," said Boswell. "We've found cast-iron pipes that were supposed to have been removed but were just capped, and we've located valve boxes we'd been trying to find for over a year." The locators have been "no problem at all" to use or maintain and have paid off well for a modest investment of time and money.

ELIMINATING FALSE HITS

Bob Lewis, underground utility coordinator for Tempe, Ariz., is a longtime equipment-locating aficionado and has



The TraceMaster utility locator can be clipped to a fire hydrant to enhance conductive locating.

competed successfully in Atlanta's "Locate Rodeo." However, he was frustrated by the state of locator technology; Lewis was using one of the best locators available but it still required yearly calibration. The practice cost \$500 a throw, and it also meant the instrument was rarely operating at peak sensitivity.

"I couldn't trust what the machine was telling me," he said, adding that "false hits" wasted time, and the possibility of missed lines always loomed; fire hydrant lines were especially hard to find. That changed in 2000, when Lewis became one of the first TraceMaster users. Lewis decided to try the enhanced-sensitivity locator because the radio link between its receiver and the transmitter allowed the user to change frequencies without walking all the way back to the transmitter. The feature saves time, and operator control of frequency means different settings can be applied on the fly as conditions change. Also, because the transmitter only needs to broadcast one frequency at a time, batteries last longer.

Since he started using the TraceMaster, Lewis has found another feature he likes:

reliability. In five years of daily use, his unit has never needed recalibration (saving him \$500 a year) and is so sensitive that "it's better than my own judgment at times. It'll find lines that I didn't know existed," he said.

SONDE ACCESSORY

The borough of Chambersburg, Pa., used to subcontract utility locating, but expense and availability posed problems. Since buying two TraceMasters in 2002, the borough has "definitely saved money," said Bruce McNew, Chambersburg's assistant water and sewer superintendent. Locates can be performed as soon as they're needed, not the next day or later. "It's more than just convenient to do locates immediately," said McNew. "It saves time, money, and our utilities."

Ken Weaver, the borough's utility locator, also is happy that the unit is easy to operate. With just two knobs, two buttons, and a big LCD screen, the TraceMaster can be used without much training—Weaver read the manual and was locating the same day. Ease of use is im-

portant; it means new employees can catch on quickly, and that all employees can use the locator.

Weaver also likes the sonde accessory. It's a small, watertight beacon that can be threaded onto a flexible rod and inserted into a pipeline; using the sonde, the depth and location of even non-metallic pipe can be pinpointed. Weaver uses the sonde to find sewer laterals. For example, he recently was startled to find a lateral that had been improperly hooked up to a septic tank.

The difficulties of utility location will never completely go away; even the best public works employees don't have X-ray vision, and the cluster of underground lines gets more complex every year. But new technology and new equipment based on that technology are making it easier to figure out what's going on down there. Sensitive, reliable locators with excellent ergonomics and intuitive displays mean that the right people are doing the work—the people with the most at stake. **PW**

—*Angus Stocking is a Paonia, Colo.-based business writer.*