Here’s a list of things to do to ensure that you stay safe and minimize the chances of causing damage during excavation:

- Call 811
- Take notes and pics
- Use the right tools
- Communicate with other utilities

**Call 811** – 811 is nationwide service that will give you all the information you need to make a request to locate pipes and other underground infrastructure. When you call 811, you can find out if it’s safe to dig with requests usually completed within two to three days, and a locate lasting 30 days. This process can also be done online – simply Google 811 with your state and the appropriate website will most likely be at the top of the search.

Make sure that you wait for the locate to be completed before you dig – it’s the law. Almost all utilities are a member of 811 and will be willing to come to your dig to help ensure that their utilities don’t get hit. In case of an emergency repair, it is also critical to call 811 before you start. The staff can quickly provide info and provide service around the clock. If you uncover an issue or hit a utility line during a dig, 811 staff have contact information to reach the right people at any time to help find someone who can make the repair. You might have to pay the repair costs depending on many factors but regardless, the repair must be made and can’t be ignored. Be responsible!

**Take notes and pics** – Make sure that you take plenty of pictures before, during and after the excavation is done. Note the locate marks and flags prior to digging but keep in mind that occasionally the actual location of the utility and the marks are very different. Take pictures of where lines are actually located. Is the natural gas line underneath the water line or next to it? Gas lines have a minimum bury depth of 24 inches, while water has a 36-inches minimum bury depth; however, it’s not uncommon to find some strange things in the trench such as lines that cross overtrop yours at intersections or Ts. Take lots of notes and use them to update your utility maps, and educate other workers and management. Take the time to help your employer and your utility become a better and safer place to work!

**Use the right tools** – How are you going to excavate the area around the repair? Be sure to choose the right tools for your excavation. Vacuum (or vac) trucks or trailers are the go-to tools for both identifying other utilities and

**Color Codes for Markings**

- **Red**: Electric power lines, cables, conduit and lighting cables
- **Orange**: Telecommunication, alarm or signal lines, cables or conduit
- **Yellow**: Natural gas, oil, steam, petroleum or other gaseous or flammable material
- **Green**: Sewers and drain lines
- **Blue**: Drinking water
safely excavating the area you need to work in. Some companies now make vac units specifically for excavation. There will be exceptions, mostly for new construction when you could use backhoes and mini-excavators. In every other case, however, the ground has been previously disturbed so a vac unit will be the best, safest and most economical way to go. Using a probe while looking for other utilities during your dig is necessary, but be careful. Use your experience and common sense when probing for utilities to avoid lines being struck.

Communicate with other utilities – With so many utilities now in the ground, the issue of other utilities attempting to make their repairs at the same time happens more frequently and has resulted in many changes, including the need to schedule repairs, new businesses being formed to located utilities and 811 laws. Look to have a representative of a specific utility on site to assist your dig. If you’re the utility that is required to be on-site, this will be time well spent and it will pay to be patient. An ounce of prevention is worth a pound of cure, and a little precaution before a crisis is better than a huge repair afterwards.

Get to know the other utility companies in your area and consider having monthly or quarterly meetings to discuss issues and ongoing or future projects. Use the photos and notes from your previous repairs to point out issues and problems to other utilities. If you build friendships with these folks, you will more likely be able to reach them after normal business hours (since this is when most of our emergencies take place). And wouldn’t you be more willing to come out for a friend?

Working near utilities is complicated business and the lack of space underground will become further complicated as utilities get replaced. If you take the steps above, you will be in a much better position to excavate more effectively, avoid striking other utilities and save time and money. ♦

Doug Riseden is the Technical Support Manager for Krausz USA, the creators of HYMAX, and has worked in the public utility field for over 20 years. His extensive experience with water and wastewater repairs and operations includes working for municipalities and private contractors, and providing water services to the NATO-led security mission in Afghanistan as part of Operation Enduring Freedom.