INDUSTRIAL SERVICES Q&A

Hydro Excavation is the Future: A Safer, Smarter Way to Dig

A Q&A with Harley Read

Lonestar Vice President, Daylighting

For many industrial companies and municipalities, hydro excavation (daylighting) has become the go-to method for safer, more precise excavation, and it is an important complement to traditional hard-edge digging techniques. In this Q&A, Lonestar daylighting expert, Harley Read, explains how the process works, why it's beneficial, and what's ahead for hydro excavation applications and technology.

Q. In simple terms, how does the hydro excavation process work, and what are its benefits?

Hydro excavation is a digging process that uses highly pressurized water rather than hard-edged equipment—yellow iron or shovels—to remove dirt and other material. Residual water and collected debris are then deposited in a mobile tank for disposal.

The most significant benefit is that it's a non-destructive method, which is particularly important where there is extensive or sensitive underground infrastructure. Not only is there a lower risk of accidental damage, but it takes less time to restore the top earth layer. There's far less disruption to the facility and the surrounding landscape overall.

Q. Has the demand for hydro excavation services increased? If so, why?

There has been an increase in demand; hydrovac is becoming more of a need. Much of the infrastructure that was put in the ground in the 1950s and 1960s was documented on paper, not a computer. People who knew the location of lines are not necessarily around anymore—and the people who are don't have access to information that would allow safe hard-edge digging.

The oil and gas industry really brought this to the forefront. In the past, excavators were accidentally hitting hidden pipelines and causing extensive damage—even explosions. With hydrovac, the chance of that happening narrows to zero; there's no destruction to the facility.

We're also seeing many municipalities requiring hydrovac techniques to be used inside their city limits. There will be more of that, especially in larger cities, where the population is high and there is a lot of infrastructure in the ground. It's really all about safety, which is the No. 1 priority.

> *"We really want to become a partner, not just a vendor."*
>
> —Harley Read

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Q. Are there specific scenarios where hydrovac is better, or the only solution to consider?

The whole process is derived from a safety aspect. We can work in and around facilities, pipelines and fiber optics, without destroying the line itself. It's much more precise than iron digging. With hydrovac, you can minimize how much soil is removed from the ground, cutting dirt like a razor and removing only what's necessary, which reduces the time it takes to back-fill that earth.

Location is a factor, too. A lot of companies use hand digging if yellow iron cannot access specific areas; but even with hand digging, there's still a risk of damaging utilities in the ground or accidentally hitting a line. In a congested area, hydrovac is the best option; you can use a hose to dig remotely, 500-1000 feet away from the truck. And low clearances are not a problem.

Q. Is there a cost or time advantage to hydro excavation?

Hydro excavation is not as fast as yellow iron methods, where you're digging with a 1-3-yard capacity bucket. It is slower than that; but compared to hand digging, hydro excavation is quicker.

You can consider hydro excavation an insurance policy. Hydro excavation is sometimes seen as a more expensive option, and can run several thousand dollars a day; but "cost versus price" is a different story when you consider safety. The decision really revolves around each customer's needs and expectations.

Once I heard a client complaining that it was hard to stay under budget with a hydrovac, and we were able to help with that, too. We suggested that we be involved throughout the bidding process to help them better understand the scope and evaluate project costs as a whole. By working with clients from the very beginning of a hydrovac project, we can help ensure that budget expectations are met. We really want to become a partner, not just a vendor.

HYDRO EXCAVATION BENEFITS

Safer–Mitigates risk of damage to unknown or congested underground infrastructure and injury to on-site personnel.

Cleaner–Minimizes impact to the surrounding environment and requires less backfilling and site restoration.

More Precise–Areas of excavation can be pinpointed with greater accuracy and sensitivity compared to mechanical methods.

Q. How new is hydro excavation technology? Are there recent advancements or enhancements on the way?

The actual technology dates back to 1960, when Canadian-based catch basin cleaners were modified to be used as hydro excavation tools. In the 1970s and 1980s, we started to see large customized vacuum trucks being developed. And while the 1990s were a slow period for technology advancements in this area, the new millennium was the beginning of rising demand, which is helping to evolve the technology. It's constantly developing, but it's still fairly early in the overall lifecycle.

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One of the biggest hurdles for hydrovac operators is the ability to haul water and debris over the road within weight legal limits. It's a broad-range issue for all companies; and some have developed smaller, lighter trucks to solve the problem. For the most part, trucks were meant to stay on the job site, but if we need to remove residue from the site altogether, we need to be out on the open road—and, therefore, reduce the weight of the truck.

Q. How does Lonestar compare to competitors? What makes you unique?

Thanks to the resources we share with Clean Harbors, there really is no other company that can offer what we do in terms of responsiveness and scope of services. We are truly an end-to-end provider for soil disposal, field services, industrial services, emergency response and much more. Most of our competitors are confined to hydro excavation alone, while we offer more than 50 service lines. That's a fundamental difference and a huge advantage to our customers.

Q. How do you approach safety issues associated with hydro excavation?

Safety, for personnel, customers, property and the environment, is our No. 1 priority. We conduct rigorous training for all our operators and technicians and are committed to ongoing safety training for every Lonestar employee. We also maintain the most stringent operating procedures in the industry. When a company chooses a hydrovac specialist for their excavation needs, there is typically a concern about safety. Working with a company like Lonestar, known to put safety first, is a big advantage.

ABOUT LONESTAR

Lonestar, in 2017, became a part of Clean Harbors—North America's leading provider of environmental, energy and industrial services. Our world-class Daylighting and Hydro Excavation Services offer industry-leading assets, experienced personnel, a turnkey infrastructure, and an ongoing commitment to technological and operational innovation. Our unique approach helps us manage and execute every phase of the excavation, transportation and disposal process safely, efficiently and cost-effectively—ensuring higher levels of productivity and customer satisfaction.

FIND OUT MORE.

For more information about Lonestar's industry-leading Hydro Excavation offering and full range of industrial services, call **800.342.6564** or visit **www.lonestarwest.com**.

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