

“Many utilities and large production plants are now specifying hydroexcavation.”

## Hydroexcavating Spells G-r-o-w-t-h

Looking for a way to grow your business? Then take a closer look at hydroexcavating, a technique that enables crews to work around utility pipes and cables without fear of damaging them.

The technology has already taken off in Canada, where most provinces have made it mandatory for roadside excavation. In the U.S., many utilities and large production plants are now specifying hydroexcavation for work around their facilities.

Hydroexcavation, in a nutshell, is water-based nondestructive excavation. It works by cutting the earth into chunks with high-pressure water and vacuuming it away. Unlike shovels or mechanical excavators, water will not slice through pipes or electrical and telecommunications cable.

“It solves a real problem among people who work around public utility lines,” says Product Manager Deepesh Nayanar. “Most of these lines are bunched together, usually under easement. While remote sensors help find buried lines, they are not always accurate. An excavator may easily damage one or more lines.”

A competing process, air excavation, uses high-pressure air but works best in light soils. “Water has better cutting action and lubricating properties than air,” says Nayanar. “Heating the water lets operators cut through frozen ground or clay. Unlike air, water’s antistatic, so you don’t have to worry about sparks around gas lines.”

One advantage of air is that it is readily available. Even so, some hydroexcavators provide enough water to go for up to seven hours without a refill. The key, says Nayanar, is minimizing the amount of water used to cut the earth. This not only extends operating times but also makes the earth easier to vacuum away.

Although hydroexcavation is not yet mandated, owners of power, gas, telephone, cable,



and fiber optic lines have begun to specify it for their contractors. The added cost is usually offset by the cost of repairing damaged lines, lower costs for smaller and more precise excavations, and improved service and reliability. Besides, some states, such as California, impose penalties on contractors that cut utility lines during maintenance.

“The best way to scope out the business potential is by calling on utility maintenance and civil engineering staff and explaining the benefits of hydroexcavation,” says Nayanar.

Another way to meet potential customers is through “One Call” or “Safe Dig” organizations. All states have these nonprofit groups, which come out and mark utility lines for anyone digging around them.

“These organizations are run by people who buy hydroexcavating services,” says Nayanar. “It’s a good idea to go to meetings, get on the organization’s Website, and ultimately discuss hydroexcavation at conferences.”

Another organization worth joining is the

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Subsidiaries of



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# Gear Up for Waterjet Safety

**W**aterjet blasting creates misty, wet workplaces. Even workers wearing nonskid boots may lose their balance or a previously inspected hose may spring a leak. When that happens, high-pressure water has the potential to cause an accident.

To reduce the chance of a serious injury, workers should wear the right protective gear. Jetstream's minimum recommendations closely follow those of the WaterJet Technology Association (WJTA), says Jetstream Southeast Regional Sales Manager Richard Padilla. They include:

**Hardhat.** A hardhat with plastic face shield is the first line of defense against flying debris and rebounding water.

**Goggles.** Eye protection is a must and some states require it for both workers and work-site visitors. Any goggles should have side shields that stop water and debris from squirting through. In most applications, it is safest to use both goggles and a face shield.

**Rain/slicker suit.** Worn over street clothes or uniform, waterproof clothing should cover both arms and legs. It keeps workers from getting soaked and protects against rebounding water and debris.

**Knee boots.** Nonskid boots are essential in a slippery workplace. They should also have steel toe caps and metatarsal protection that covers the top of the foot. This helps defend against a glancing stream of high-pressure water.



**Gloves.** Rubber gloves keep hands dry and protect against debris and cuts. They also make it easier to grab onto guns and other waterjet equipment.

**Earplugs.** Waterjets can shoot water faster than the speed of sound, driving noise to levels above 90 decibels. Form fitting earplugs or ear muffs (or sometimes both) are a must.

"That's the bare minimum," says Padilla. "We recommend and sell TurtleSkin®

WaterArmor because it is designed to protect against a glancing blow of up to 40,000 psi."

Made from Kevlar, the same fiber used to make bulletproof vests, TurtleSkin offers the highest level of protection commercially available. Its protective ensemble includes gaiters that cover boots from the metatarsals to the knee; chaps that protect between the knee and groin; a torso protector; and gauntlets to cover the forearms.

Finally, all waterjet workers should have a WJTA medical card. "Even a minor waterjet injury can be serious," says Padilla.

"This card gives medical professionals the information they need to treat wounds properly. All workers should carry one of these in their pockets."

Jetstream is distributing free WJTA medical cards to companies that request them. To get one, contact Lori Chase at 1-800-231-8192, Ext. 239 or e-mail sales@waterblast.com.

## Hydroexcavating — continued

National Utility Contractors Association (www.nuca.com), which has local affiliates in many states.

Several expositions bring together buyers and sellers of hydroexcavation services. These include Underground Focus Live in July, Demo Expo (with outdoor demonstrations) in September, and Damage Prevention Conference

& Expo in December. The most widely read magazines in the field include Underground Construction and Trenchless Technology.

Vactor has prepared a hydroexcavation CD-ROM filled with information and presentations you can use or modify when visiting potential customers. For a copy, contact Kristy Gussarson at 847-622-7044 or kgussarson@fsepg.com.

# NEWS & EVENTS

*Interested in Learning more about Guzzler and Jetstream products?*

*Stop by and see us at these upcoming events!*

### Guzzler

Coal-Gen 2005  
Revival of the Fittest  
August 17 - 19, 2005  
San Antonio, TX  
Go to  
<http://cg05.events.pennnet.com>  
for more information

### Jetstream

2005 WJTA American  
Waterjet Conference  
August 21 - 23, 2005  
Houston, TX  
Go to  
<http://www.wjta.org>  
for more information

# NEWS



The Federal Signal Environmental Products Group's new Houston Certified Equipment Service Center is not only bigger but designed to service customers faster. The unit, managed by Brian Halstead, provides service, repairs, parts, and used equipment for Vactor, Guzzler, Jetstream, and competitive units. Visit our open house on August 24 and see the improvements for yourself!

# Advanced Training Yields Bottom Line Results

**T**raining pays. Just ask Gary Toothe, Training Manager for Thompson Industrial Services, Inc., which operates 11 locations from Virginia to Georgia.

“Our training classes helped us halve the cost of repairs in its first full year,” says Toothe. “We encourage everyone to do their scheduled maintenance religiously. But the extra training helped us avoid wearing out parts, calling mechanics, or taking units out of service.”

Toothe, who started with a shovel and worked his way up, eventually joined Thompson. He began doing training full time in 2003. “I noticed we had high maintenance costs and thought we could do something about it,” he says.

What Toothe did was go back to school at Jetstream and Guzzler. “I already knew how to use the equipment,” he says. “I basically went through their factories asking everyone to teach me the tricks of the trade.”

Toothe returned with page after page of advanced techniques. He turned the information into a two-day course that covers troubleshooting, field operations, and maintenance.

“Troubleshooting is one of the things we stress,” he explains. “If you get a call in the middle of the night that a truck won’t pump or the pressure’s down, there’s not much you can do. We want our operators to be able to solve the problem themselves or at least eliminate the obvious causes.”

Most people, says Toothe, guess solutions based on their experience. He teaches them to focus quickly on the problem by eliminating five potential trouble spots: power, filtration, collection, transportation, and jobsite. The process of elimination draws attention to the actual problem.

“For example, suppose the mercury inches start to rise as the loading rate drops,” Toothe explains. “The first thing I do is disconnect the hose at back of truck. If the readings don’t return to normal, the problem is not in transport or jobsite. Then I lift the bed of the truck slightly. That separates filtration and collection from power. If everything returns to normal, it’s got to be filtration or collection.



**By focusing on advanced operator train, Gary Toothe slashed his repair costs in half. Here and below, trainees learn the workings of their equipment in order to diagnose problems in the field.**

Field operations training teaches operators to get the most out of their equipment. “Whether it’s a water blaster or vacuum truck, if you set it up wrong it’s like running a garden hose from a fire truck,” says Toothe. “You just wasted that pumper.”

Toothe teaches operators such fundamentals as laminar and sublaminal flow of various materials through different types of hoses. He also shows them how to calculate the right pressures, hoses, and tips for the job. “If they’ve made it to the operator level, they intuitively know the math. We just fill in the blanks for them.”

The final training module covers preventive maintenance. It shows operators how to inspect equipment and make minor field repairs that do not require a mechanic or crane. Equally important, it includes guidance on how to make maintenance part of the daily routine so that machines remain in factory specification.

Students pull apart machinery, follow the air and water paths, and then put them back together. They also learn pro tips, like how to grease valves properly or unstick a univalve.

“We’ve always had a very good working relationship with Jetstream and Guzzler, and they just opened their factory to us,” says Toothe. “They’ve been very involved in helping us keep everything up to date.”

The result is real bottom-line savings.



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## Website Simplifies Ordering

**N**eed Jetstream supplies? Then check out the changes underway on our Website (www.waterblast.com).

“Our goal is to create a state-of-the-art showroom with detailed product information,” says Sales and Marketing Specialist Michael Bullard. “We’re making it easier to find what you want from the Website’s thousands of products and replacement parts.”

The changes are apparent on the pump products pages. It features improved product subcategories (with pictures and descriptions) that simplify finding the right product.

Pumps, for example, are broken down into bareshaft pumps, fluid ends, fluid end upgrades, and pump parts. Each subcategory provides a product overview and a chart that compares the features of similar products. “That’s going to be a real time-saver,” says Bullard.

Clicking product models brings up complete descriptions, key features, and technical specifications. Each product page also features links to related products, replacement parts, accessories, and information.

A new feature lets visitors chat live online with Jetstream representatives. They can ask questions or request help finding products and get assistance immediately.

Future improvements will build on this service-oriented approach. “In addition to improving the site’s appearance, we plan to add product manuals, interactive troubleshooting guides, advanced search tools, and many other features that help our customers get the job done,” says Bullard.

Look for the control guns and fittings sections to go live this summer. The rest of the site should be up and running early next year.

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