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**PROFILE:**

**PRIDE AND PASSION KEEPS  
APC CORPORATION THRIVING  
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**DOWN & DIRTY:**

**CONTRACTOR OVERCOMES  
BURSTING OBSTACLES  
TO REPLACE SEWERS**  
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# NOT SETTLING FOR SMALL

Phoenix's SSC Global still growing  
and delivering after 40-plus years  
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James Bacon  
Operator  
SSC Global

**TIPS:**

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AND MAINTENANCE**

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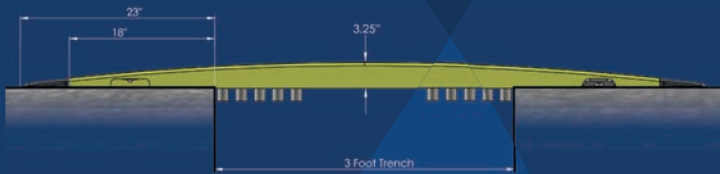
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the bucket

**digDIFFERENT**

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## Lasting Generations

### SIMPLE BUT EFFECTIVE WAYS TO MAKE SURE YOUR COMPANY STAYS IN THE FAMILY AND REMAINS PROFITABLE

BY CORY DELLENBACH, EDITOR

**W**hat does it take to make a business last 40-plus years in an industry that sees many ups and downs? It can be a mixture of things: strong business sense, accounting skills, good employees, knowing when to diversify, and many more.

Both contractors featured this month have been around for more than four decades. APC Corporation, based in Massachusetts, celebrates 42 years this year, and Arizona-based SSC Global is in its 47th year.

The owners have their own stories of how their companies succeeded. Owner Mike Flaherty of APC says his business survived because of its employees, while SSC Global owner Marcia Veidmark credits being able to diversify.

Help ensure your own company is around for generations by following these two successful companies' best practices:

**They evolved.** Within their specialty, they moved with the times. SSC Global started by offering opencut trenching, then added horizontal boring. Now the company also offers air excavation.

**They have a strong core of managers and longtime employees.** There was continuity in the ownership at APC, which is in its second generation and will go on to a third. The company also has a core group of "lifer" employees who are the brain trust of the organization.

**They are people-focused.** Both companies are about earning a profit, but they also care about their people. APC pays union wages, and both companies offer solid training.

**They own their facilities and equipment.** Being property owners gave the companies an asset that protected them from too-high rents in the downturn, and gave them an option for obtaining capital if banks otherwise wouldn't lend.

**They look for opportunities to grow.** SSC Global added the word "global" to its name a few years ago to show seriousness about expanding. The company started by serving only Arizona, but now serves most of the southwest U.S. and the U.S. Virgin Islands. APC, meanwhile, is looking at ways to serve the newer power plants going online to generate growth.

What are you doing to make sure your company can be passed on to future generations? I'd enjoy hearing your ideas and sharing them in this magazine. You can call me at 800/257-7222 or email me at [editor@digdifferent.com](mailto:editor@digdifferent.com). I look forward to hearing your tips.

#### GROWING YOUR EQUIPMENT FLEET

Are you looking at growing another way? Maybe you're looking at new equipment? You should take a look at two big shows coming up in the next couple of months.

CONEXPO runs March 7-11 at the Las Vegas Convention Center. The show brings 2,500-plus exhibitors to over 2.5 million square feet and offers more than 150 educational sessions, including utility-based programs.

Then, in April, you can head to Washington, D.C., for the North American Society for Trenchless Technology's (NASTT) No-Dig Show April 9-13 at the Gaylord National Hotel and Convention Center. No-Dig offers six tracks and 160 peer-reviewed, noncommercial presentations, including case studies detailing jobs and cost-saving opportunities for municipalities and utilities. The show's more than 170 exhibits showcase trenchless products and services.

I'll be at both shows this year and would like to connect with as many of you as possible. At No-Dig, I'll be at booth No. 240. I look forward to meeting you!

Enjoy this issue! ▼

WHAT DOES IT TAKE TO MAKE A BUSINESS LAST 40-PLUS YEARS IN AN INDUSTRY THAT SEES MANY UPS AND DOWNS?

BOTH [LONG-TIME] CONTRACTORS FEATURED THIS MONTH ... HAVE A **STRONG CORE OF MANAGERS AND LONGTIME EMPLOYEES.**





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## FALLING IN

### Hydrovac Gets Pulled into Sinkhole

A sinkhole in Georgia caused by a corroded pipe pulled in a hydrovac in a parking lot of a car wash. The machine ended up with its cab and front tires hanging in the air, while the back end was in the hole. The hole was estimated to be about 20 feet wide by 10 feet deep. [digdifferent.com/featured](http://digdifferent.com/featured)

## OVERHEARD ONLINE

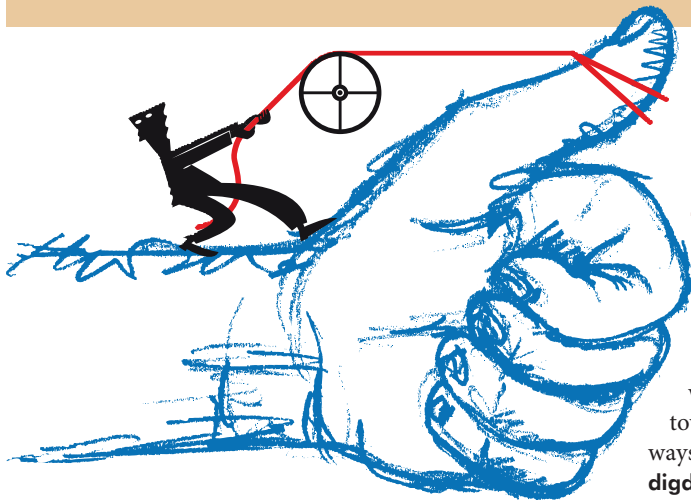
“AS THE INDUSTRY CONTINUES TO CHANGE AT A RAPID PACE, I AM **FOCUSED ON MAKING SURE WE CONTROL THE THINGS WE CAN CONTROL**, WHICH IS DOING A GOOD JOB EVERY DAY FOR EVERY CUSTOMER.”

*A Family Operation*  
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## DOWN & DIRTY

Have you handled a tough or unique job lately? We would love to share how you completed it and what made it tough in *Dig Different*. Tell us about that tough or unique job by emailing [editor@digdifferent.com](mailto:editor@digdifferent.com) or calling 800-257-7222.



## EARNING THE TRUST

### Build Back Customer Trust After a Hit to Your Reputation

Good reputations can take a while to build, but don't take long to destroy. That can be true of individuals and companies. A mistake — when it's made in public — can eradicate the goodwill people have toward your company. Sometimes it's not even your mistake. There are ways though that you can rebuild that trust.

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Profile

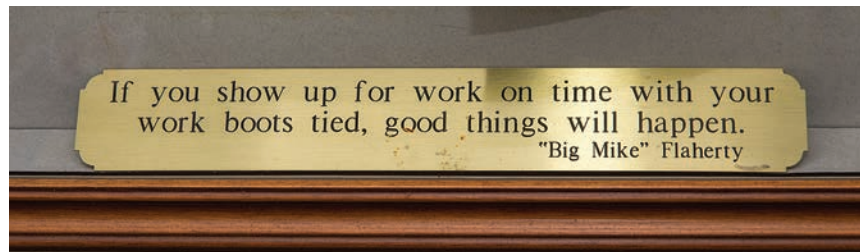
"WE ARE HARD TO COMPETE AGAINST BECAUSE **THERE'S QUITE A LOT OF PRIDE HERE.**"

Mike Flaherty

APC Corporation owner Mike Flaherty (left) and operator Stefano D'Emilia perform a high-rail vacuum excavation service with a GapVax vacuum truck at the Stiles & Hart Brick Company in Bridgewater, Massachusetts.







# BUILT WITH PASSION AND PRIDE

## FOCUS ON CUSTOMERS AND EMPLOYEES IS DRIVING FORCE BEHIND APC CORPORATION'S SUCCESS

STORY: CORY DELLENBACH PHOTOS: RICHARD T. GAGNON

**I**t's not hard to hear the passion Mike Flaherty has for his company. Now owner of Advanced Pollution Control (APC) Corporation, Flaherty has been involved with the company since 1977, when his dad owned it. His passion is just as strong now as it was 40 years ago.

"We are hard to compete against because there's quite a lot of pride here," says Flaherty, 64. "To last 42 years I think is an accomplishment, and we still have some of the same customers we had back then."

The company, based in Bridgewater, Massachusetts, started off with a specialty in serving power plants and wastewater treatment plants. Through the years, the business has evolved to include utility locating and other vacuum excavation services. Three things haven't changed; dedication to customers, a family-like atmosphere and hardworking crews.

### SERVICES TAKING OFF

Flaherty's dad, known affectionately as Big Mike, started

the company in 1975. He saw a need for power plant cleanup work in the Boston area and bought his first jet/vac truck. About 95 percent of the initial workload was servicing power plants, and water and wastewater treatment plants. Those services expanded over time, and now the company provides vacuum excavation for construction companies.

"It's a service that has taken off for us," Flaherty says. "Construction companies are now realizing that vacuum excavation saves them a lot of collateral damage because they aren't striking water or gas lines. It's not as fast as an excavator, but it certainly has its place."

The company's fleet now consists of nine GapVax combination units. The newest truck arrived in March 2016, and like the others, has a stainless steel tank. "They're all stainless steel," Flaherty says. "I spend a little extra in the beginning, and the trucks are very dependable and don't rust out. It takes a lot more punishment before it'll deform or needs to be replaced."





APC boasts a fleet of nine GapVax HV-56 hydroexcavators. All are painted the similar pale yellow color and equipped with 185 cfm air compressors for air excavation capabilities.

## Going with yellow

It's not hard to spot one of APC Corporation's nine GapVax hydroexcavators. The machines are painted a pale yellow from the Peterbilt chassis to the debris tank.

"There are some different options on each truck and there are improvements that the manufacturer has made," says APC owner Mike Flaherty. "The fellas have to get trained on everything so when they are out in the field they know how to work everything and work it safely."

All nine tri-axle hydrovacs have 16-yard debris tanks and hold 3,200 gallons. After the company

takes ownership of a machine, crews install a 185 cfm air compressor on it to allow for air excavation. The trucks also have hot- and cold-water pressure washers.

The color choice goes back to when Flaherty's dad founded the company in 1975. When he bought his first vacuum truck he didn't have a lot of money to paint it. That's when longtime family friend Ed Porter told him he was throwing away some yellow paint — three 5-gallon cans of it. "We painted one truck and it looked pretty good, and we've stayed with that color ever since," Flaherty says.

### APC Corporation Bridgewater, Massachusetts

**OWNER:** Mike Flaherty II

**FOUNDED:** 1975

**EMPLOYEES:** 15

**SERVICES OFFERED:** Utility locating, vacuum excavation, power plant services, tank cleaning

**SERVICE AREA:** All of New England

**WEBSITE:** [www.apc-corporation.com](http://www.apc-corporation.com)



APC crews try to perform dry vacuum instead of hydroexcavation because it allows them to backfill with dry material. "The dry stuff is far easier to control," Flaherty says. "It's neater to work with than mud slurry and saves our customers money. We never bring waste from one job to another location due to environmental regulations, so if we can't use what we excavate, the customer has to pay for it to be dumped."

To allow for air excavation, the company has outfitted each truck with a 185 cfm air compressor.

Not long after starting vacuum excavation, Flaherty saw another need in the area and branched off into servicing railways. Two hydrovac units are fitted with high-rail systems. "We do about 15 percent of our business with the high-rail trucks," Flaherty says. "We're called out to derailments and things like that. You never know when you're going to get busy."

### BUILDING A DEPENDABLE CREW

Having a readily available crew capable of doing any job is important when taking on spur-of-the-moment jobs. Flaherty is proud of his crew of 15.

"The big thing that makes a difference with our people is their tenure," Flaherty says. One operator, Mike Darmetko, has been with the company for 38 years, and operations manager Rick Gay for 35 years. Operator Jim Silva has been with the company for 15 years. The rest of the workforce averages eight years of experience. "When we send out a truck, we're sending out a very capable, well-paid union operator who has seen a lot of different jobs and knows how to do the jobs the most efficient and safest way."

Flaherty attracts and keeps employees by treating them right. He makes sure his crew gets 40 hours of work a week throughout the year. The company offers holiday and vacation pay, as well as sick time. "The fellas seem to care about the company and they want to see it do well so that we're out working and not staying

here in the maintenance facility," Flaherty says. "We want to be making money, not losing money."

Even though nearing retirement age, Flaherty will still join crews on job sites, put the work clothes on and start digging. "I'm happy while I'm doing it," he says. "If you have dependable equipment and a happy crew, it's a winning situation. What I see with our competition is crews that don't care as much, so the job takes longer and there's a level of frustration with them."

### A SAFETY FOCUS

An experienced crew also helps with safety measures. The company provides regular safety training seminars for confined-space entry, lockout/tagout and other typical procedures. "We'll also do respirator training, personal fall protection, hearing protection, hazard communication and forklift safety, and we'll go over personal protective equipment," Flaherty says. "We try to get the jobs done as quickly and safely as possible, and try to keep our reputation as a good company."

The safety focus doesn't stop at the shop — crews are always thinking safety on the job. If heading to a power plant job, crews will pull one of the company's 14-foot enclosed safety trailers. Flaherty put together APC's first safety trailers in 1980, and the equipment they carry has advanced in quantity and sophistication.

"They're equipped with breathing equipment for working in bad air in confined spaces," Flaherty says. The trailers have cascade breathing systems with eight 4-foot bottles, each with 250 cubic feet of air, good for about eight hours each.

(continued)



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APC Corporation team members on a job site include (from left), operator Michael Flaherty, owner Mike Flaherty, and operators Shaun Wilcox and Ben Chaves.

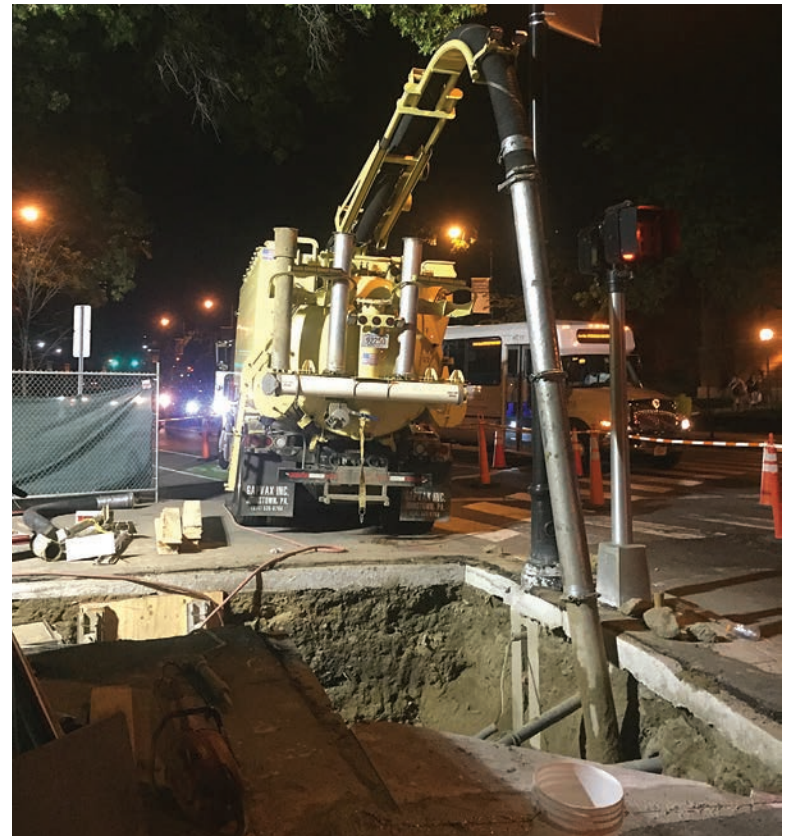
“CONSTRUCTION COMPANIES ARE NOW REALIZING THAT **VACUUM EXCAVATION SAVES THEM A LOT OF COLLATERAL DAMAGE** BECAUSE THEY AREN’T STRIKING WATER OR GAS LINES. IT’S NOT AS FAST AS AN EXCAVATOR, BUT IT CERTAINLY HAS ITS PLACE.”

Mike Flaherty

“A hose no longer than 300 feet connects the bottles to a worker’s personalized breathing mask. A five-minute emergency escape breathing bottle is attached to each workers’ belt. We don’t charge for it unless we have to use it, but we have it all if the air changes or something bad happens. We just go into a different mode and no one gets hurt.”

The safety trailers also carry rescue and retrieval tripods used in confined spaces. Tripods can be placed over a manhole to raise and lower workers, and to retrieve them if something goes wrong. Other fall-protection and safety equipment brought to the job include winches and beam trolleys, Tyvek suits from DuPont Personal Protection (paper coveralls that protect workers’ clothing from contact with waste), encapsulated suits, ventilation fans, rain gear, and extra rubber boots and gloves. *(continued)*

Mike Flaherty is proud of his crew of 15, readily available to quickly and safely take on whatever type of job comes their way.





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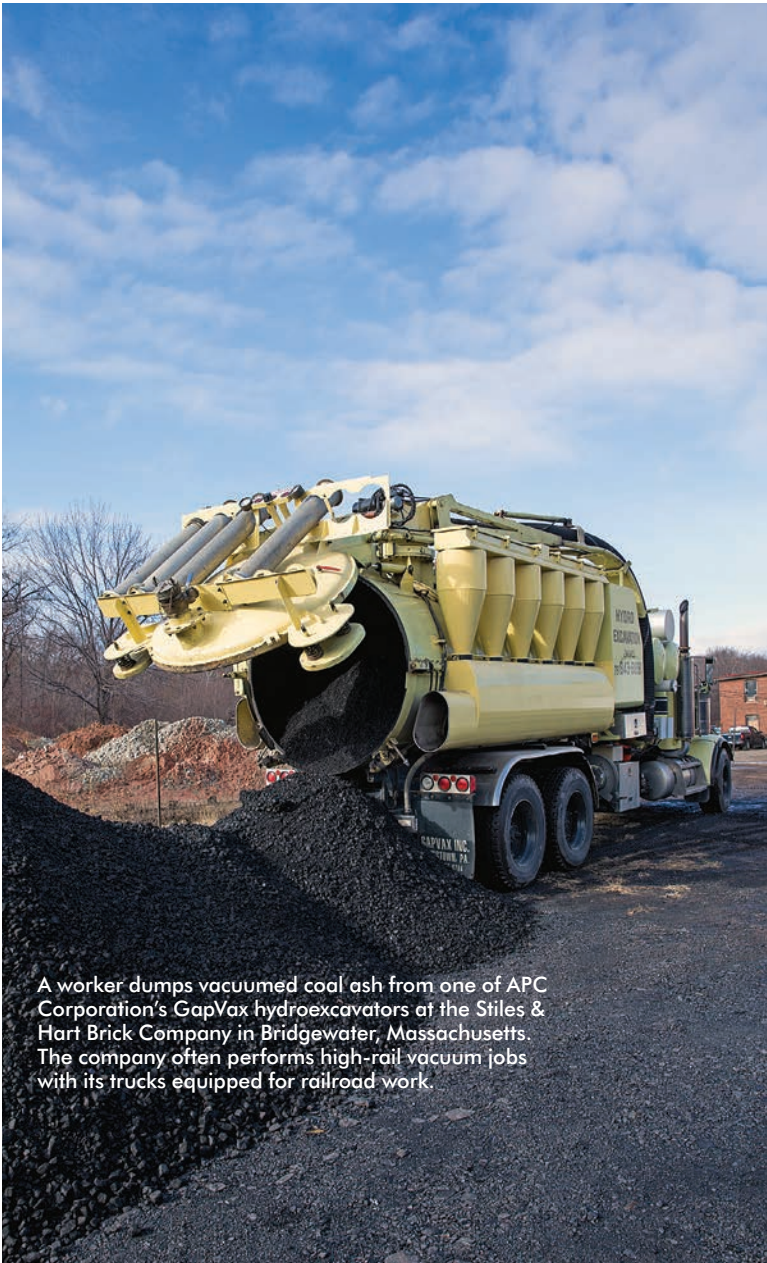
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A worker dumps vacuumed coal ash from one of APC Corporation's GapVax hydroexcavators at the Stiles & Hart Brick Company in Bridgewater, Massachusetts. The company often performs high-rail vacuum jobs with its trucks equipped for railroad work.

### VACUUMING COAL

One time when crews made sure to have the safety trailer with breathing tanks was in November, when the company was hired to clean coal silos at a power plant. The coal was burning within the silos. "The methane gas inside of it was something we had to be careful of," Flaherty says.

APC workers ran 200 feet of aluminum pipes from the fourth floor of the power plant, where the coal was, down to the trucks and vacuumed the coal that was burning. They used a conveyor belt system beneath the silos to get the coal moving to the vacuum hose.

"When the methane got too high, we let the plant know we didn't want to continue working because it was going to be a possible explosion," Flaherty says. "They wetted down the fire and then we were able to continue."

Another vacuum excavation company was also on the job site, but Flaherty says his team out-produced the competitor, four to one: "It was because our trucks were maintained better and our crew knew what they were doing better."

APC removed 77 truckloads of coal, averaging about 18 trucks a day. The job was finished in about four days.

## Tailored to the job

When APC Corporation gets the call to vacuum out mussels and shells from power plant intake pipes, the company puts to use its custom-made dump containers.

"We do a lot of vacuuming of shells at power plants with their intake pipes and the trucks suck in a lot of water," says APC owner Mike Flaherty. "To handle all that water, we have dewatering containers. There are perforations inside the regular containers so the water will all go back into the ocean, leaving behind the mussels and shells."

It wasn't always that easy. Until about 15 years ago, the company, based in Bridgewater, Massachusetts, used regular dump containers and then had to vacuum out the water: "It just wasn't working out real well."

The company has numerous regular containers (Galbreath) and roll-off trucks built by Beam Truck & Body. The seven GMC crew cab diesel pickup trucks are equipped with tools the crew might need — shovels, boots and other gear.

"Over the 40-some years we've been in business, I've tried to buy equipment so that we don't have to rely on other people," Flaherty says. "I like to control the job from the phone call to the end."



An APC Corporation truck is backed up a ramp to off-load into one of the company's specialized dewatering dump containers.

### MAINTAINING THE REPUTATION

Even after 42 years in operation, Flaherty doesn't take anything for granted. He still wants to see sales increase, pick up some new power plant jobs and establish the company as the top vacuum excavation contractor in New England.

"I'd like to get some of the new power plants on board with us cleaning water filtration tanks or things like that," Flaherty says. "We're still going to work on sewage treatment plants and just try to get more business and keep everyone employed, and keep our reputation as high as it's always been." ▼

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4"	\$127.55	\$230.15	\$281.45	\$332.75	\$363.53	\$384.05	\$435.35	\$9.75
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**SSC GLOBAL EVOLVES WITH THE INDUSTRY AND  
STRIVES TO CONTINUE GROWING AND DELIVERING**

STORY: KEN WYSOCKY PHOTOS: MARK HENLE

**D**Back in 1969, Marcia and Arvid Veidmark Jr. and his parents established Specialized Services Co. as a traditional open-cut excavating company. Their assets consisted of nothing more than a used pickup truck, a Ditch Witch trenching machine and a trailer — and a contract to install underground residential telephone cables in Phoenix, Arizona.

A quick fast-forward to today reveals a company now known as SSC Global, with nearly 40 employees, about \$5 million in revenue in 2016, and roughly \$4 million worth of advanced trenchless excavating equipment. Moreover, the company's primary geographic market now includes the entire southwestern U.S.

What happened during those 47 years underscores the importance of investing in new tech-

nology — in this case, horizontal-auger boring machines and air-excavation vacuum trucks — and adapting to evolving market conditions. It also reflects the importance of diversification, both in services offered and customers served, not to mention less tangible but still critical elements: A strong entrepreneurial spirit and the ability to learn from mistakes.

“From a field perspective, you have to be open to trying new things — and be willing to fail,” says Arvid Veidmark III, the son of Marcia and Arvid Jr. He co-owns the company with his mother and his brother, Abe Veidmark. Marcia is the majority owner and serves as company president, Arvid III is the executive vice president and Abe is the vice president. (Arvid Jr. is retired.)





SSC Global operators  
Jake Conley (right) and  
Tony Gamez use air excavation  
on a job site in Phoenix.

**Specialized Services  
Company (SSC Global)**  
Phoenix, Arizona



**OWNERS:** Marcia, Arvid III and Abe Veidmark

**FOUNDED:** 1969

**EMPLOYEES:** 35 to 40

**SPECIALTIES:** Horizontal-auger boring, tunneling,  
pipe ramming and vacuum air excavation

**SERVICE AREA:** Southwestern U.S.

**WEBSITE:** [www.sscboring.com](http://www.sscboring.com)





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Marcia Veidmark

The leadership team at SSC Global includes (from left), Vice President of Finance Michelle Walker, President and CEO Marcia Veidmark, Executive Vice President Arvid Veidmark III, equipment manager Steve Walker, and vacuum division manager Curtis Zwar.

“Like most entrepreneurs, we learned as we went along,” Marcia says, noting they knew very little about excavating when they started the company. “At times, it was both daunting and gut-wrenching. Not everything worked, but we have good minds and were willing to persevere, as well as hire [experienced] outsiders to help us solve problems. We’re not at all ego-driven.”

#### TAKING THE PLUNGE

Marcia and her husband were still in college when the opportunity to start the company came along. Why did they decide to do something they’d never done before? For starters, a potentially large volume of spin-off work if things went well. In addition, the work was relatively simple and straightforward. “The guys knew equipment and I knew about business, to an extent,” she explains. “We knew how to pull things together and make it happen.”

More work did indeed follow, and the foursome — which included Lois



Jake Conley (left) and Tony Gamez use one of the company’s eight VACMASTERS air-excitation units on a job site in Phoenix, where the company is exposing utilities.



Veidmark and her husband, the late Arvid Veidmark Sr. — ran the company until 1976. Then Marcia and Arvid Jr. managed the company until 2002, when he retired. At that point, Arvid III, Abe and their third son, Aaron, were already employees. Marcia's niece, Michelle Walker, has been with the company for 18 years and is now the vice president of finance and administration. And two of her nephews, Curtis Zwar and Steve Walker, also occupy management positions.

The Veidmark's business acumen faced a stern challenge in 1989, when they realized that the market for opencut excavating was becoming over-saturated with competitors. "When we started out, we didn't realize how risky it was (to be so dependent on one customer and one type of service)," Marcia notes. As competition increased, low-ball bids made it harder to win contracts and profit margins suffered, Arvid points out. The solution? The company shifted gears and invested in an American Augers horizontal-boring auger machine.

"Only two other local companies were doing that kind of work at that time, while there were at least 20 or so opencut competitors," Arvid says. "We realized there were better profit margins in horizontal boring, plus it opened up other markets and customers for us, enabling us to diversify."

"Opencut excavating was labor-intensive and required many employees to physically perform the work at a low (profit) margin, whereas the auger boring allows for fewer, more highly skilled workers to use the specialized equipment and complete the work at a higher margin," Walker explains.

The shift in market focus "changed the face of SSC forever," Marcia adds. It also allowed the company to downsize to a more manageable 35 or 45 employees.

#### DIVERSIFICATION CONTINUES

In 2003, market conditions — this time a dip in demand for horizontal boring — once again forced the company to evolve. In response, the company invested in its first air-excavation vacuum truck, a VACMASTERS 3000 unit, aimed at capitalizing on the market for potholing. Air excavation is faster and easier than hydroexcavating because the spoil is immediately reusable as backfill, as opposed to the time and expense involved with vacuuming up and disposing of wet, hydroexcavated spoil.

The company bought the VACMASTERS truck because management realized that investing in one would actually be less expensive than what it was already paying annually to subcontract the work out to another company. As years went by, the company further diversified by asking customers what other complementary services they required. A good example is shoring boxes for boring pits, which are needed to operate horizontal-auger boring machines, Arvid points out.

"Our customers told us it would help them out if we could do excavating and shore the bore pits," he says. "That's why we now own the excavators and the shore boxes. Back in 1989, we only installed steel casing (for utility lines). Now we turnkey the entire trenchless portion of a project because we have that capability. That's what separates us from our competitors."

"We wanted to be a one-stop contractor for our customers," Marcia adds. Moreover, after weathering three recessions in the 1980s, 1990s and the most recent economic downturn that started in 2007, management saw more and more value in diversifying its services so the company wasn't so heavily reliant on one revenue stream (from opencut excavating).

But only related and complementary services get consideration. "We don't go out and decide we want to

be, say, a baker and start making bread," Marcia quips. "We focus on finding additional pieces of the underground-utility world."

#### EQUIPMENT MATTERS

The company's business volume is currently split fairly evenly between horizontal boring and air excavation. On the horizontal-boring end of the business, the company primarily works as a subcontractor on utility infrastructure projects, responsible for underground boring for and installation of steel casings that utilities use to house both wet (water and sewer, for instance) and dry (electricity and natural gas, for example) utility lines.

To serve that market, the company relies on seven auger boring machines made by American Augers and Barbco, two small-boring-unit cutting heads made by The Robbins Company for cutting through hard rock, and a large inventory of augers made by American Augers and Barbco, ranging in diameters from 8 to 72 inches. In terms of larger equipment, the company also

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In the air-excitation division, the customer base primarily consists of land developers, engineering firms, municipalities, public-transit agencies and pipeline companies. “We find existing horizontal and vertical utility lines and compile reports so the landowners know where existing utilities are prior to designing a new project,” Arvid says. To service those customers, the company owns eight vacuum trucks made by VACMASTERS (one 1000 model, two 3000 models and five 4000 models).

Over the years, the company also accumulated something less tangible but equally as important as equipment: experience. That was particularly important in the horizontal-boring market because it’s such a specialized service that relies on highly technical machines. Compared to potholing, horizontal boring is a complex endeavor that’s made even more complicated by wildly varying terrain and soil conditions, not to mention hidden and unmarked underground obstacles, Arvid says.

“When you run into a problem with open-cut work, you typically can just get a bigger and more powerful excavator,” he explains. “But in trenchless excavation, after you’ve gone through 12 or 24 months of permitting, design review, land acquisitions and so forth, you’d better make sure you have every single base covered. Because once you start a tunnel and you run into a problem, you can’t just start over.”

Problems pop up frequently enough, but that’s where experience becomes a valuable commodity. As an example, Arvid cites a recent job in which SSC was hired to bore a 90-foot-long 72-inch-diameter steel casing for a 48-inch-diameter, gravity-fed sanitary sewer line for Pima County in Arizona. Just 12 feet into the bore, however, the tunneling crew ran into a large chunk of con-

crete. It turned out to be one of five large footers supporting a box culvert built in 1903 under a railroad track.

County officials considered slightly altering the course of the bore and using a lift station to accommodate the resulting change in elevation. But SSC found a more cost-effective alternative: Use jackhammers to break through the 5-foot-thick footers.

In one particularly challenging job in the U.S. Virgin Islands, SSC engineers figured out how to replace four 120-foot-long corroded pipes running under a large earthen dike at a major oil refinery. “For a variety of reasons, open-cut excavation wasn’t an option,” Arvid says. But SSC offered the refin-

**“AT TIMES, IT WAS BOTH DAUNTING AND GUT-WRENCHING. NOT EVERYTHING WORKED, BUT WE HAVE GOOD MINDS AND WERE WILLING TO PERSEVERE, AS WELL AS HIRE [EXPERIENCED] OUTSIDERS TO HELP US SOLVE PROBLEMS. WE’RE NOT AT ALL EGO-DRIVEN.”**

Marcia Veidmark

ery three different options and even figured out a way to do the project more efficiently and at a lower cost than expected.

“One thing that truly sets us apart is almost five decades of experience,” Marcia says. “Our business acumen has grown tremendously over the years.”

#### FURTHER GROWTH EXPECTED

Looking ahead, Marcia expects the company to continue growing, possibly through both adding more services and expanding geographically. A reasonable expectation going forward is owning 10 air-excitation vacuum trucks and boosting employment to around 45 employees, Marcia says.

## Boring machines deliver exciting revenue results

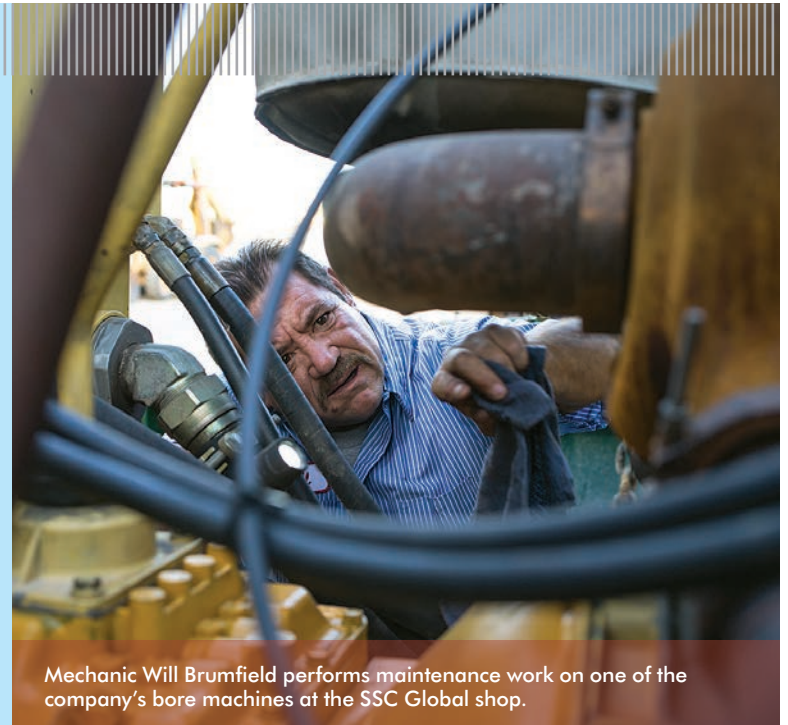
For sheer return on investment, it’s tough to top the American Auger horizontal-boring machines Specialized Services Company (SSC Global) has purchased over the years. The first American Auger unit the company purchased back in 1989 for nearly \$38,000 is still going strong today — and generating revenue, says Arvid Veidmark III, a co-owner and executive vice president at the company, founded in 1969.

Yes, the machines are expensive. A new auger-boring machine these days costs well over \$100,000. On the other hand, Veidmark estimates the model 36/200 unit the company bought in 1989 — one of four American Auger bore machines now owned by the company — has bored tunnels for tens of thousands of feet of steel casing and produced millions of dollars in revenue during the last 27 years.

Moreover, the machines pose a high barrier to market entry, says Veidmark’s mother, Marcia, president and co-owner. “People don’t competitively enter the horizontal-boring field because of the large capital investments it requires,” she points out.

Dependability is another reason why the machines are such great revenue producers. Minimal downtime not only boosts productivity and increases customer satisfaction, it also helps maintain profit margins on projects. “As long as you take care of them, they’re very reliable machines,” he says. “We have great mechanics and we really respect the equipment — keep it well-maintained and serviced.”

One key to that dependability factor: DEUTZ air-cooled diesel engines, which he says are more reliable than liquid-cooled engines, which include seals and gaskets that are eventually prone to failure.



Mechanic Will Brumfield performs maintenance work on one of the company’s bore machines at the SSC Global shop.

“The air-cooled engines are designed to run hotter and they better endure the Arizona heat,” he says.

Moreover, the auger-bore machines are basic, well-engineered units. The main components consist of an engine that turns a gearbox that, in turn, spins the auger, plus a hydraulic pump that drives the rams, producing up to 1.2 million ft-lbs of thrust. The machines can turn augers up to 72 inches in diameter, he says.





Marcia Veidmark and her son, Arvid Veidmark III, stand at a job site near Phoenix. Marcia and her husband Arvid Jr., along with his parents, founded SSC Global 47 years ago. Their current geographic market includes the entire southwestern U.S., and they attribute their nearly five decades of experience as central to that success.

“We’ve never been interested in being a small company,” she says. “We’ve always wanted to be a good-sized company that offers professional opportunities for employees and provides them with great benefits and a career.”

Management signaled its intentions three years ago when the company changed its name to SSC Global. While the company isn’t yet a truly international firm, the name change clearly indicates management’s ambitions.

“Our customers had been asking us to join them in other locations and often didn’t know we could and would travel anywhere with them as their trenchless contractor,” Marcia says of the name change. “Putting ‘global’ in our name allows us to promote this message in the upcoming five to 10 years as we expand.”

Moreover, management feels secure about the company’s long-term prospects because of aging utility infrastructure. “There’s a lot of security in our industry,” she explains. “We all need underground utilities. They either need to be replaced as they age or new construction requires installation of new utility lines.” Furthermore, trenchless excavating equipment is expensive, which poses a barrier to market entry by newcomers.

The company’s strong relationships with customers also bodes well for the future. Arvid says SSC has served some customers for 20 years, and those bonds helped it persevere during hard economic times. “Most companies are in business for the money,” Arvid concludes. “We’re in it for the relationships.” ▼

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## Composite road plates provide safe job site for trenching operation

### PROBLEM

J.H. Lynch & Sons Inc. of Rhode Island was contracted for a National Grid project where the company needed to bury power lines. The project required trenching across driveways and cross streets, in a residential development. They needed a way to keep the pavement secure and workers safe during the trenching operation.

### SOLUTION

"I came across **Oxford Plastics composite road plates** in an article in a trade publication, and thought they would be a great fit," says Mike Hevey, PE, of J.H. Lynch & Sons. Composite Modular RoadPlates were designed. They include a hi-vis yellow color, integrated anti-skid surface and chamfered edge (no cold patch required). They require only two technicians to install, the sections interlock, they are HS20-44 Certified and utility and DOT approved.

### RESULT

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## Excavators outlast high altitudes for residential development work

### PROBLEM

With a rapidly growing housing market in northern Colorado, new residential developments are underway. General contractor Coyote Ridge Construction (CRC) specializes in the underground phases of residential construction projects and needed productive and reliable equipment that wouldn't overheat due to working in Colorado altitudes at more than 5,000 feet.

### SOLUTION

Working with 4 Rivers Equipment, CRC added two **Hitachi excavators, a ZX350LC-6 and a ZX135US-6**, to its fleet. The excavators are busy completing utility and foundation work for several residential developments located in Fort Collins, Loveland, and the surrounding areas.

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The 1325B Lubrication and Bentonite Pump from Akkerman is a hydraulically driven, high-pressure bentonite pump for effective pilot tube lubrication and flushing of cuttings, particularly on long bores and downward slope alignments. The unit will displace a Marsh Funnel viscosity as high as 50 seconds to flush cuttings with pump flow up to 6 gpm at 2,600 psi. The 325-gallon tank can independently agitate, or agitate and pump to maintain mud viscosity. The 1325B is powered by an electric-start 14 hp Kohler gasoline engine. **800/533-0386; www.akkerman.com**

## 2. Water Cannon VRT100-190 unloader bypass kit

The VRT100-190 unloader bypass kit from Water Cannon is ideal for high gpm applications and hydroexcavating systems. The 1/2-inch inlet, outlet and bypass ports provide high efficiency and maximum flow rates up to 26.4 gpm. Pressures are adjustable up to 2,000 psi, and the pressure adjustment nuts can be locked in place to avoid accidental overpressurization. **800/333-9274; www.watercannon.com**

## 3. Hi-Vac Combo Hydro

The new Combo Hydro from Hi-Vac Corporation is a hybrid of Aquatech sewer cleaners and X-Vac hydroexcavators and comes with

a powerful 27-inch Hg blower. It has a large-capacity water pump for sewer cleaning that runs 80 gpm at 2,500 psi and hydroexcavation water flow of 20 gpm at 2,500 psi. Equipped with a 400,000 Btu boiler, the heated enclosure for the water pump and all water components enables the Combo Hydro to work in cold conditions. **800/752-2400; www.hi-vac.com**

## 4. ASV Posi-Track RT-75 compact track loader

ASV's Posi-Track RT-75 compact track loader features dual-level suspension with suspended wheels and axles, allowing it to manage many types of terrain at faster speeds. The RT-75 comes standard with 18-inch-wide tracks, resulting in a ground pressure of only 3.6 psi. The tracks contain embedded co-polymer cords and are produced using a single-cure process, eliminating cure-point weaknesses that can lead to premature breakage. The RT-75 has a Cummins 2.8L turbocharged 75 hp diesel engine that produces 221 ft-lbs of torque. **800/205-9913; www.asvllc.com** ▼

## This Issue's Feature:

# RIVAL Hydrovac brings legal limits back to contractors

BY CORY DELLENBACH

Designed to help contractors working in the city, the **RIVAL Hydrovac** is 10 feet shorter and 2 feet lower than the typical full-sized machines on the market.

"I told my engineer to build a truck as big as you can that will be legal when it's full of your normal load of debris," says Tim Dell, one of three partners in RIVAL Hydrovac. "Now the contractor can go to a job, work, drive off, and be compliant."

The RIVAL Hydrovac is built on a Western Star 4700 tandem chassis and is powered by a Cummins ISL 380 hp engine with Allison 3000 Series automatic transmission. The 7-cubic-yard debris tank has a full-opening rear door with automatic latches and mud gate. The smaller debris tank helps keep the truck weight-compliant when traveling to and from dump sites.

"I've been in this hydrovac business for 20 years and I've known for 19 years that the trucks are really too heavy for the city," Dell says. "When this industry started, it was just for the oil and gas industry in Canada, so the trucks were built really heavy and big because they were out in the woods and on pipeline rights of way, and they were usually off-loading the contents on site.

"As the industry evolved, the trucks moved into cities to work, and it's become more popular," he adds. "There's been some smaller trucks and trailers made, but by-and-large the trucks haven't changed. The trucks are grossly overweight when they're loaded — the big trucks."



RIVAL Hydrovac

The RIVAL Hydrovac sports four 200-gallon poly water tanks and has a 14 gpm, 2,500 psi Pratissoli water pump and a Robuschi Robox 105 blower system capable of 2,850 cfm and 28-inch Hg vacuum.

"The truck is designed to pressure off. You can run the blower in a pressure mode as opposed to vacuum, so you can blow the contents out of the back of the truck through a hose," Dell says. "In this case, you could off-load on location if you had another truck or trailer there or other tank there."

The 6-inch top-mount boom has a 340-degree rotation and is extendable to 20 feet. The truck is also equipped with several safety features, such as a retractable railing on the roof and two back-up cameras.

"The railing is for guys who might have to climb up and do maintenance," Dell says. "They can tie off and be safer up there."

The truck went on the market in early fall and 25 units have already been sold. It is being built under contract by Foremost.

"This is primarily for a city-based utility contractor," Dell says. "It covers all the complaints we get on the big trucks that work in cities."

**403/550-7997; www.rivalhydrovac.com**





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# Sandstone Cowboys

**CONTRACTOR BURSTS UNDER AND THROUGH STONE, STREETS AND HOMES TO REPLACE BROKEN AND BLOCKED SANITARY SEWERS IN CENTRAL OKLAHOMA**

BY SCOTTIE DAYTON

Combination fittings on mobile homes in three Oklahoma City parks tapped directly into 6-inch clay sewers blocked by massive root intrusions that cracked the hubs and pipes, causing backups. Broken fittings on some homes allowed wastewater to discharge on the surface.

Plumbers routinely snaked the lines and drilled holes through the worst impactions at huge expense to the previous owners. In places, the mains were no longer serviceable.

When the new owners learned that opencutting to replace the lines would cost twice as much as buying the real estate, they called John Johnson of Water Works Plumbing in Oklahoma City. His company specializes in pipe bursting residential and commercial sewer lines.

Using a 40-ton ram from Pipe Genie Mfg., the crew worked six months to replace the most critical lines with 6-inch HDPE SDR17 pipe. Besides roots, they fought a dense sandstone substrate and undocumented utilities without interrupting service to homeowners.



Jason Dunn (left) and Casey Hill reattach the severed 6-inch HDPE pipes with both ends in midair.

## WHAT TROUBLE LOOKS LIKE

Throughout the project, Johnson's plumbing crew arrived once or twice a day to unblock clogged lines and keep the sewers flowing, while his sewer team located problem areas with an inspection system from Vu-Rite Video Inspection Systems and NaviTrack locator from RIDGID. When roots blocked the camera's progress, they opened a path with a RIDGID K-1500 sewer and drain cleaner, but even that bound up on some occasions trying to pass through the drilled holes.

Workers pipe burst 200 feet of mains in the first park, 1,600 feet in the second and 2,000 feet in the third. At each residence they used shovels to excavate the sewer, cut a hole in it, and ran temporary laterals from the stubs under the homes to the pipe.

On the second pull in the last park — 220 feet under three homes, two alleys and a city street — progress went from substantial to awful.

- PROJECT:** Replace 3,800 feet of sewers without interrupting service
- CUSTOMER:** Mobile home parks, Oklahoma City
- CONTRACTOR:** Water Works Plumbing, Oklahoma City
- EQUIPMENT:** Pipe bursting system, Pipe Genie Mfg., 877/411-7473; [www.pipegenie.com](http://www.pipegenie.com)
- RESULTS:** Sewers replaced in six months at huge savings to owners

**DOWN & DIRTY**

PHOTOS COURTESY OF JOHN JOHNSON

“The sewer lay on sandstone under 4 feet of sand,” says Johnson. “As it passed under the street for 40 feet, the compacted road bed was like granite around the pipe.”



Pressure on the 3,000 psi ram increased to more than 2,900 psi as the bursting head struggled to push the restricting soil aside. At 15 feet under the street, the head stopped moving, while the ram 200 feet away began pushing into the timber cribbing.

Johnson killed the power and called Pipe Genie inventor Gerry Robinson, who recommended spreading the pulling force over a larger area and setting the vertical timbers deeper.

## FULL STOP

“Naturally, it was Friday afternoon and those homes were still on a disconnected sewer,” says Johnson. “We pulled out the ram, brought in a sewage pump and bypassed the liquid to another main downstream.”

Johnson visited a steel scrapyards on Saturday morning looking for two 6-foot I-beams and a 4- by 6-foot by 5/8-inch-thick resistance plate. Meanwhile, Eric Howell widened the pulling pit to accommodate the larger plate, then he and Johnson jackhammered two holes in the sandstone at the head of the pit before setting the I-beams and plate with the excavator.

**“THE SEWER LAY ON SANDSTONE UNDER 4 FEET OF SAND. AS IT PASSED UNDER THE STREET FOR 40 FEET, THE COMPACTED ROAD BED WAS LIKE GRANITE AROUND THE PIPE.”**

John Johnson

45-degree saddle wyes on laterals and electrofusion couplings to join the separate pulls of pipe. Obtaining a variance from the state’s Construction Industries Board to use the saddles took three months, since the International Plumbing Code prohibits them on private laterals.

“They made all the difference in efficiency and integrity,” says Johnson. “We delivered a root-proof product with no seams or rubber gaskets.”

## SUCCESS TAKES A TURN

Another uneventful run of 500 feet followed. “After that, I was convinced my men and the ram were bulletproof,” says Johnson. “Our next pull was 120

The pull resumed at 4 p.m. with the pressure on the ram hovering near maximum capacity. “As soon as the head crossed the street, the pressure dropped to 900 psi, which is barely more than an idle,” says Johnson. The last 180 feet went flawlessly.

Throughout the job, Johnson used an electrofusion processor (M.T. Deason) with Plasson ElectroFusion



Casey Hill (left) and Jeff Cole set up the 40-ton pipe bursting system (Pipe Genie Mfg.) for the pull through the 90-degree bend under a mobile home.

feet at a depth of 4.5 feet with a 90-degree turn centered under a mobile home. Although risky, I decided to pull through the 90.”

The pulling pit was 50 feet from the elbow. The job went smoothly until the 2.75-inch chain pulling the head tried to line up with the ram, came out of the elbow, and lodged somewhere in the sandstone. The pull stopped.

With only 18 inches of clearance under the home, workers increased the headroom by spending two days digging a 4-foot-deep trench to the elbow. Unable to leave the pipe running through a backyard, a privacy fence, and into the street, they severed it at the entry pit and relocated it. They also removed the ram, which allowed the sewer to flow while they worked.

Once the trench was completed, the crew used a Robert Bosch Tool Corporation rotary chipping hammer with a spade bit to excavate through the sandstone to the main. They used the camera to locate where the chain left the pipe and chipped down to it. At one point, it ran under a structural support beam.

The park manager sent his maintenance man to relocate the beam. “Every delay took half a day,” says Johnson. “The guys finally freed all of the chain and found the pulling head another 20 feet away under the home.”

## MORE HEADACHES

Using shovels and the chipping hammer, the crew excavated a second pulling pit behind the home and aligned it with the lateral. After requesting a utility locate, they exposed a marked communications conduit, but nicked one of two undocumented electrical lines. A few sparks sent them dashing for safety. Several minutes later, sparks began arcing 10 to 15 feet high. It took the local utility all afternoon to repair the line.

The next morning, project manager Casey Hill drilled a 1.5-inch pilot hole from the second pulling pit to the elbow excavation to feed the pullback cable to the chain. His tool, a Hydro Bore from Pipe Genie, achieved 20,000 pounds of pushing power with a high-pressure jetting nozzle on the end of a hardened steel rod. As water from the RIDGID portable pressure washer blasted a hole through the sandstone, Hill threaded on 2-foot-long extension pipes.

To enlarge the channel, Hill and Jeremiah Gravitt switched to a Borit tool with a 3-inch backreamer bit attached to an industrial drill. Boring took the entire morning. Meanwhile, Jonathan Waite and Jason Dunn reassembled the ram and set the fusing machine in the entry pit. Reattaching the severed pipes was done with both ends in midair.

The pull from the second pit brought the bursting head up to the elbow. The crew then disconnected the ram, set it in the original pulling pit and reconnected the chain to the head to complete the run.

“We never expected to use every tool in our arsenal on the same job in the same yard on the same day, but it took that to see pipe moving again,” says Johnson. ▼



Eric Howell (left) and Casey Hill use an electrofusion processor (M.T. Deason) to install an HDPE saddle wye (Plasson).





PHOTO COURTESY OF CASE CONSTRUCTION

An SR210 skid-steer from Case Construction dumps material on a job site. There are many small and easy maintenance checks you can do on these machines to keep them running well. One of the biggest is checking the hydraulics and the fluid before each job.

# Tips to Keep Your Skid-Steer in Tip-Top Shape

**EVEN SMALL MACHINES LIKE SKID-STEERS AND COMPACT LOADERS REQUIRE REGULAR MAINTENANCE CHECKS AND SPECIALIZED CARE TO KEEP THEM RUNNING**

BY IRWIN RAPOPORT

**S**kid-steers are found on many construction projects and they perform well, but that is dependent on proper maintenance.

Good maintenance generally starts with the basics, like changing the oil, but contractors should also be dealing with wear-and-tear issues that come up to keep their machines running smoothly.

While changing oil is a given, John Dotto, Case Construction’s brand marketing manager for skid-steers and compact track loaders, stresses the need to pay close attention to the service intervals. “Refer to your operator’s manual,” says Dotto. “Generally there is a table with a first 50 hours system check and beyond that, you’re looking at intervals of 250 and 500 hours.”

When it comes to simple items, like changing the oil, Dotto says the interval is usually 500 hours. “Keeping on top of that, keeping a log, and marking your filters is really important,” he says.

Here are some other maintenance tips:

## Know how to operate in winter

Winter conditions can put a strain on skid-steer engines if the cold weather startup procedures are not followed.

“You have to let the machine warm up so that the engine coolant and hydraulic oil reaches the correct temperature, so that you’re not abusing those systems,” says Dotto. “Hydraulic oil is pretty viscous at low temperatures, and then gets thinner as it heats up. You don’t want to be running functions over relief valves with cold oil, as it can become detrimental to the life of the hydraulic system and components.

“Some machines have some cold weather protections such as an rpm limiter to prevent revving the engine too early in a cold start application,” he adds.

“You also don’t want to let an engine idle at low temperatures for an extended period of time.”

## Don’t hesitate to contact the manufacturer

Mechanics, be they at a dealership or a general contractor, should never hesitate to seek information from the manufacturer if they encounter a problem when repairing a vehicle.

“Modern trouble-shooting is pretty sophisticated, and mechanics should lean on the resources available at the manufacturer and dealer level,” says

**“MAINTAIN THAT CLOSE RELATIONSHIP WITH YOUR DEALERS AND MANUFACTURERS, AND UNDERSTAND THE TOOLS AND RESOURCES AVAILABLE TO YOU.”**

John Dotto

Dotto. “We have a large service support unit that can assist by phone, email and online tools that are available at a Case dealer. Maintain that close relationship with your dealers and manufacturers, and understand the tools and resources available to you.”

## Take full advantage of diagnostic tools

Built-in diagnostic systems are improving the ways that the owner, operator and technician interact with each machine. This includes telematics, and built-in sensors and electronics, that can help inform technicians of equipment issues that may affect health and performance.

“It’s becoming more important to operators and mechanics, and to owners, to have this information,” says Dotto. “Fuel efficiency can be tracked, and



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technicians can keep better track of maintenance intervals and operating parameters through telematics. Certified dealer technicians with plug-in laptops and other software-related items can immediately diagnose error codes. There is a lot that can be inferred now with data from the machine that can shorten/eliminate downtime and improve overall performance.”

#### Take care of tires and tracks

Tires and tracks often bare the brunt of wear-and-tear issues, but ensuring job-specific systems are being used can reduce this.

“Pay attention to the severity of your applications and understand the differences in the types of tires and tracks offered by the manufacturers,” says Dotto. “Marrying the right tire to the machine will make you more productive. If you’re running in more harsh or caustic environments, such as those with manure and fertilizers, use a heavy- or severe-duty tire. If you’re working on smooth pavement most of the time, use a pneumatic tire. If you’re in a situation where cuts and punctures are a possibility, a semi-solid option is a good choice. Having one or two spares on hand is a smart practice, and don’t forget to repair punctured tires.

“Tracked machines — CTLs — are ideal for applications where greater flotation is required, such as working in soft ground or on finished lawns where you don’t want to create rutting or disturbance.”

#### Keep auxiliary hose connections clean

Failing to clean auxiliary hose connections, according to Dotto, is the No. 1 way that dirt and contaminants can get into your hydraulic system.

“Wiping off the connection to the attachment and the connection on the machine is a really easy step that you can take,” he says. “If you don’t have a rag on hand, use whatever it takes. It’s worth it for the life of your machine. It should always be done when you’re going to hook up any hydraulically driven attachments that have hose attachments connected to a skid-steer/compact track loader.”

#### AFTER-TREATMENT OF YOUR MACHINE

“There are many different ways that these machines achieve Tier 4 Final emissions certification. Understanding the system on your machine can help it be more productive throughout the day,” says Dotto. “For those over 75 hp, where we run SCR technology, they have onboard diesel exhaust fluid (DEF) tanks. Just knowing that the DEF needs to be topped off is crucial and you can do that when you fill up with diesel fuel. Systems like this that do not require regeneration help reduce downtime and keep engine exhaust temperatures lower, which can be advantageous in certain applications.

“With DEF, just make sure that you know which tank you’re filling up,” he adds. “The DEF tank has a blue cap. The only fluid that goes into it is DEF and that is another good reason to keep things clean in the engine compartment.” ▼

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# Fasten Your Seatbelt

## MAJOR ONTARIO GOVERNMENT REGULATORY CHANGES ARE COMING THAT WILL IMPACT THE HYDROVAC SECTOR

BY BARRY WOOD

The current Ontario provincial government has an “activist agenda,” according to provincial political media commentators. Whether one agrees with that or not, this year will feature the introduction of regulatory measures that will significantly impact hydroexcavation companies and their customers, both directly and indirectly. Regulations include:

1. New Ministry of Transportation (MTO) rules on hydrovac licensing, driving qualifications, weight restrictions and overweight permits, grandfathering provisions for noncompliant hydrovacs, fuel taxes, Commercial Vehicle Operators Registration (CVOR) plus collateral cost impacts (e.g. road tolls).
2. New Ministry of the Environment and Climate Change (MOECC) carbon tax regulations called “cap-and-trade” that will affect large and small businesses, including major impacts on utilities, particularly natural gas utilities.
3. Future regulations expected from the MOECC on disposal of hydrovac slurries, emerging from policy guidelines and discussions on managing excess soils.

While some of the new 2017 MTO regulations are unique given Ontario’s historical treatment of hydrovacs, the 2017 greenhouse gas emission reduction regulations, as well as anticipated regulations affecting stewardship of hydrovac soil slurries, are in the vanguard of regulations that will likely be enacted across North America in the future. So for those operating in other parts of North America, take note.

### MTO REGULATORY CHANGES AFFECTING HYDROVACS

MTO regulation developments affecting hydrovacs arise from historical treatment of hydrovacs as “road-building machines,” or RBMs, which developed as a class of equipment falling outside the definition of commercial vehicles and related regulations under the provincial Highway Traffic Act (HTA).

While RBMs were allowed to travel on Ontario roads and highways, they did not need to be licensed or plated, were allowed to use colored diesel with a lower fuel tax cost, did not require a driver’s license to operate and did not require annual safety inspections or operate under a CVOR. Still, RBMs developed both dimensionally and in load-carrying capacity in ways that exceeded the HTA rules.

The MTO has enacted regulations, effective July 1, that will require all hydrovacs to be treated as commercial vehicles. Hydrovacs will be licensed and plated, and will have to use clear diesel fuel — paying an additional \$0.143 per liter fuel tax. Drivers will be required to have specific licenses and hydrovacs will be registered under the CVOR with driver and vehicle safety performance tracked.

Hydrovacs sold in Ontario after Jan. 1 will have to be compliant with HTA regulations regarding dimensions, axle weights and steering axle weight distribution. Current hydrovacs will be “grandfathered” regarding weights and

dimensions, with weights limited to the gross vehicle weight design limit and axle weight design limits prescribed by the vehicle manufacturer. There will be one-time overweight permits required to be purchased that will record individual vehicle weight limits. The grandfathering period is for 15 years, from the model year, with a three-year grace period for older hydrovacs. Specifically, all



Barry Wood

**THE 2017 GREENHOUSE GAS EMISSION REDUCTION REGULATIONS, AS WELL AS ANTICIPATED REGULATIONS AFFECTING STEWARDSHIP OF HYDROVAC SOIL SLURRIES, ARE IN THE VANGUARD OF REGULATIONS THAT WILL LIKELY BE ENACTED ACROSS NORTH AMERICA IN THE FUTURE.**

hydrovacs older than 15 years must be HTA-compliant by 2020. On a practical level, this means that older hydrovacs will be off the road in 2020.

The Hydrovac Alliance of Ontario (HVAO), a voluntary group of hydrovac operators that banded together and represent a good portion of the industry in Ontario, has been fully supportive of regulatory change, promoting improved safety such as driver’s licenses, annual inspections, CVOR, as well as a reasonable grandfathering period for existing hydrovacs. The HVAO also accepted that reasonable licensing fees, fuel taxes and overweight permits would be a future cost of doing business.

The HVAO has not been pleased that the CVOR forced on the hydrovac sector is no different than that for long-haul commercial carriers. The CVOR credit system in Ontario is based on kilometers driven. Hydrovacs do not typically drive many kilometers each day to the job site, so only a few minor accidents or traffic violations will put an operator’s CVOR in jeopardy, threatening the survival of the business.

The grandfathering period will be onerous; well-looked-after hydrovacs can operate for 20 years or more. This is likely to be a particular challenge for smaller hydrovac companies and those starting out. The weight restrictions are challenging for some hydrovac designs. Load-carrying capacity will be significantly restricted in some cases.

The MTO regulations will dramatically change how the hydrovac sector



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operates in the future in Ontario. There will be new hydrovac designs and new ways for making an existing fleet of hydrovacs operate more effectively within the new regulations. There will need to be an emphasis on managing load weights and more frequent disposal/off-loading of debris. Costs to customers will invariably rise — hopefully not to a level where the use of hydrovacs is constricted.

### CARBON TAX REGULATIONS

The provincial government agenda includes taking a strong stance on reducing greenhouse gas emissions through implementation of carbon taxes via a cap-and-trade framework.

The *Globe and Mail* newspaper describes the cap and trade system as, "... the centerpiece of the Wynne government's Climate Change Action Plan, meant not only to meet tough targets for slashing greenhouse gas emissions but to spark a sweeping transition to a low-carbon society by changing the way Ontarians get around, heat their homes and run their businesses."

The newspaper goes on to note that, "The cap-and-trade system is getting high marks from environmental experts, who say it will achieve its central aim of driving down emissions. But critics caution that the plan contains financial pitfalls: A lack of checks means there could be few restrictions on how the government spends revenue raised from the system, while volatility in other carbon markets suggests the amount of revenue will fluctuate wildly. ... Under cap-and-trade, the Ontario government will set a hard limit on emissions, which will steadily get lower every year. Companies will have to buy permits — called allocations — from the province for every ton of carbon they burn. The cap will mandate emissions cuts to 15 percent below 1990 levels by 2020, 37 percent below by 2030 and 80 percent by 2050."

There is considerable lack of detail on how the cap-and-trade system will work for businesses. Increases in fuel costs through carbon taxes are very likely. Natural gas utilities have been identified as a primary focus area for cap-and-trade emission activity. The bottom line for businesses operating in Ontario: Expect higher operating costs and market changes.

### MANAGING EXCESS SOILS

The Excess Soils Working Group has recently completed its task of advising the government on managing excess soils. It appears regulations will be developed to enforce compliance at the municipal level, rather than only guidelines.

While the primary focus has been on larger excess soil generation that occurs during building construction, the hydrovac sector is being looked at for development of regulations affecting daily disposal of hydrovac slurries. The regulations are likely to focus on the proper testing of materials before disposal and the suitable reuse of materials to avoid unnecessary disposal.

As one can discern from all these changes, the life of a hydrovac operator in Ontario is going to get increasingly complicated — and costly.

### ABOUT THE AUTHOR

*Barry Wood is the president and CEO of Ontario Excavac and also serves as chairman of the Hydrovac Alliance of Ontario. Email him at editor@digdifferent.com.*

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# The Past and Future of Vacuum Excavation

## TECHNOLOGY HAS ADVANCED FROM THE GOLD RUSH TO UNDERGROUND CONSTRUCTION

BY JASON PROCTOR

Vacuum excavation has long been an essential practice on job sites across the globe. Every underground construction operator, large or small, seeks to keep crews safe and projects profitable. In a modern, competitive industry, finding the right machine to balance these needs can be difficult.

From damage prevention to fluid cleanup on horizontal directional drilling projects, vacuum excavation saves operators time and helps improve safety. Understanding the transformative history of these machines will arm today's contractors with an appreciation for the technology and provide insight into how they're transforming today's underground construction industry.

### UNDERGROUND ORIGINS

The history of vacuum excavation stems from the use of hydroexcavation as far back as the late 1800s, when pressurized water was used for mining purposes in the U.S. Breaking up soil using pressurized water created a cleaner and safer way to dig. From there, hydroexcavation expanded as a method used on underground construction sites throughout most of Canada and the U.S.

Beyond hydroexcavation, the modern "vac" machine can be traced back to cleanup duties and sewer applications beginning in the 1950s. As technology progressed and new innovations took hold, vacuum trucks became a fixture on HDD sites, where they proved effective in cleaning up drilling slurry and fluids exposed at the entry and exit pits on these HDD projects. This method aided operators by improving their visibility of buried utilities and providing an efficient method of fluid disposal.

After their introduction, vacuum excavators found continued heavy usage in Canada through the 1990s and into the present. The industry began to grow significantly in the late 1990s as several equipment manufacturers began entering the market with both truck- and trailer-mounted models to fit a growing demand for hydroexcavation in a variety of locations across North America.

### INNOVATIVE APPLICATIONS

At the turn of the 21st century, the demand for vacuum excavation led to new designs focused on improving performance on a variety of job sites. Reduced noise, for example, supported the excavators' growing use in residential neighborhood projects. Innovations within nozzle technology focus on increasing digging capability while reducing damage to underground utilities. Larger tank capacities kept machines on job sites longer and provided



A Ditch Witch vacuum excavator sits on a job site in New Hampshire where a crew is using it with a directional drill.

greater hauling capacity, improving contractor profitability. For example, some municipal operators improved time savings by nearly 50 percent with larger tank sizes.

Additionally, the machines evolved to fit smaller job site needs as well. Compact units featuring smaller tanks improved ease of use and maneuverability in tight work areas while other, larger models kept operators productive on bigger, more time-intensive projects.

Beyond mechanical updates, today air excavation has found a new prominence. For years, many contractors dismissed the effectiveness of air excava-



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tion. Due to the increased time and cost savings from not having to dispose of spoils, the productivity and efficiency of air excavation has proved significant for many operators. Unlike hydroexcavation, which requires access to water, air excavation keeps machines running and operators profitable without costly trips to acquire water or dispose of spoils.

And, just as the applications for vacuum excavation have evolved, so have the safety regulations. While there is not a consistent set of regulations for all

**THE MARKET FOR VACUUM EXCAVATION IS EXPANDING IN ALL DIRECTIONS. EVERY CUSTOMER HAS A UNIQUE NEED THANKS TO THE VERSATILITY OF THESE MACHINES AND ADVANCEMENTS IN NEWER TECHNOLOGY.**

states or countries today, several regulations are focused on responsible digging practices. In the U.S., mechanical excavation is prohibited within a “safe zone” on an underground construction job site, creating an opportunity for the use of vacuum excavation for damage prevention.

Vacuum excavators have been used for damage prevention since the 1980s, however this role for today’s vacuum excavator took off around 2010 as efforts were being made to avoid damaging existing underground utilities. This concentrated effort is spearheaded by the Common Ground Alliance, which reported 363,176 underground events in the U.S. and Canada in 2015. New innovations and machine designs continue to aid vacuum excavation contractors in revealing hidden utilities and preventing damage to utilities on the job.

## TRENDS AND PREDICTIONS

The market for vacuum excavation is expanding in all directions. Every customer has a unique need thanks to the versatility of these machines and advancements in newer technology. As more vacuum excavators are used for

damage prevention and utility location around the U.S., market demand is accelerating the need for these machines. The Pipeline and Hazardous Materials Safety Administration found that since 2005, excavation damage is the leading cause of pipeline accidents. This has created additional incentives to use vacuum excavators for utility locating of all sizes.

Today, manufacturers are focused on enhancing operator safety in their machine designs. Operating a vacuum excavator has long required physical demands, including a need to connect and hold various hoses throughout a job. Recent developments are focused on improved ergonomic designs to help keep operators safe and comfortable on the job site.

In addition to operator safety improvements, damage prevention is increasingly critical in areas around the country. Underground construction operators will continue to rely on vacuum excavators to pothole and safely locate hidden utilities, and to help minimize cross bores. And as fiber build-out and utility expansion continues, vacuum excavators will play an integral role in uncovering, digging and cleaning up these jobs.

## ABOUT THE AUTHOR

Jason Proctor is the vacuum excavation product manager for Ditch Witch. ▼

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# Smartphones — Big Benefits, Big Costs

**YES, THEY ARE GO-TO DEVICES FOR YOUR BUSINESS. BUT IT PAYS TO REVIEW YOUR PLANS AND USAGE FREQUENTLY SO PRICES DON'T GET OUT OF CONTROL.**

BY ERIK GUNN

The Apple iPhone marked its 10th birthday in January — but can anyone imagine the world without it or its principal rival, the Android-based phone launched roughly 20 months later?

Neither of them were the first smartphones — mobile phones combining the convenience of cellphones with the power of computers. But they turned the smartphone from a specialized tool for a small slice of businesspeople into one found in nearly every pocket or purse.

They're still a business tool, and they're relied on more and more by all of us, including contractors and equipment operators. And neither they — nor the data they bring to the palms of our hands — are cheap. But are they worth it, anyway?

You can get smartphone apps to track business mileage, manage cloud-based task lists, and much more. Smartphones can also tie into your databases back at the shop. With features such as Google Maps, they're supplanting stand-alone GPS devices for many of us. And they allow rapid communication between you and your crews and among crew members themselves — whether by email, text messaging or good old-fashioned voice phone calls (how 20th century!).

## 'NAKED' WITHOUT THEM

Hollis T. Warren Sr. owns Hollis Warren Inc., a service company located in central Delaware near Dover, the state capital. His drivers have been using Apple iPhones on the job for 10 years — about as long as they've been around. "I never thought it would be that big a deal," says Warren. "But you feel naked if you don't have one on you anymore."

They're a necessary communication tool, he says. Drivers can phone ahead to let customers know they're on the way. If they lose their way en route to a job, they can call for directions or bring up Google Maps.

The map apps also allow the driver to scope out a customer's yard configuration before arriving at the job site. Utilizing an app called Planimeter in conjunction with the map, drivers can calculate how long a hose they'll need to run from the truck. When the work is finished, the driver can take the customer's credit card payment on the spot using the phone.

A driver who runs short of a needed part can just call back the office for the item to be driven out to the job instead of having to stop, drive back to fetch it, and then return. By avoiding lost time, "it's going to save you a lot of money," says Warren.

Warren's employees can choose to use their own iPhone or one issued by the business. In either case, they must follow rules: No personal calls or web

surfing during work hours — "They've got breaks and lunch when, if they've got something personal, they can go and use them for that," Warren points out. And no calls while driving — that's against Delaware state law unless the driver can talk hands-free.

Before the iPhone, the business used two-way radios. Warren says there's no comparison between that technology and the iPhones. The radios could only communicate back to the office — and they cost nearly 10 times what an iPhone cost. "You can spend as much as \$5,000 for one radio in the truck."

He's never put pencil to paper to measure what the phones are worth, but he estimates they probably net him a 10 to 15 percent savings on various costs. And that's even when you consider that his current business data limits are probably too low. "We're always going over — so it's expensive using them sometimes," Warren admits. But the convenience they offer is worth it. "It's almost like you've got a mini office there in your hands," he continues. "Even with the cost of use it's still a lot cheaper than the old way of doing things. Time is money, and it saves time."

## THE SMARTPHONE EQUATION

If you don't have smartphones in your business, chances are you're wondering about them. But even if you do, you might benefit from a closer look at how you're using them. Either way, you may want to consider a few important factors about bringing (or keeping) smartphones on the job where you work.

### Whose smartphones will your employees use — their own, or a company-issued one?

If they use their own, you'll need to work out clear and fair policies for reimbursing them for the cost of their phone use for business purposes. You may find an advantage to simply getting everyone a company phone for company business. In either event, be sure to establish clear policies and procedures, as Warren points out. Making sure they can't fritter away your work time on *Words with Friends* or *Angry Birds* games is just the start.

### What are the best cellular networks in your region?

Service varies around the country, and as the big carriers continue to invest in improving their coverage, the best carrier this week could fall behind six months down the road. Ask people you know; you could start with your employees, who probably have their own phones already and can tell you about their experiences. *Consumer Reports* from time to time ranks the various carriers; it wouldn't hurt to see what the magazine's most recent report says about the carriers in your area.





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#### What specific plan will be best for your business?

Data plan structures are changing all the time. Early on, carriers offered unlimited data plans (for a definite markup, to be sure); later they backed away from them. Now they're coming back, pricier than ever — but it's an open question whether they're worth the expense. Even "unlimited" plans have their limits: If your usage goes over a certain level, carriers may effectively slow down your data speed.

**"IT'S ALMOST LIKE YOU'VE GOT A MINI OFFICE THERE IN YOUR HANDS. EVEN WITH THE COST OF USE IT'S STILL A LOT CHEAPER THAN THE OLD WAY OF DOING THINGS. TIME IS MONEY, AND IT SAVES TIME."**

Hollis T. Warren Sr.

Under most plans, though, data is priced in increments of 5 or 10GB a month — and if you go over, there's a premium charge. You can see the dilemma — do you go with a rich plan that might be more than you need, essentially "wasting" the additional dollars it costs compared to a cheaper plan that's closer to your actual usage? Or do you go with a lean one, risking that you'll go over it and have to pony up more?

Only you can decide which answer suits your situation better. Once you do choose, watch your bills: If you're always paying overage charges, you'll probably be better off stepping up to a monthly data plan with a higher ceiling. And if you always use a lot less than you're paying for, you can switch downward after a few months.

Note — I'm saying plans, not carriers; carriers typically lock you into a contract of two years or some other fixed term, which remains in place even if you shift your data plan up or down.

#### Would you do better on a 'Pay as you Go' plan?

An alternative to going with the big carriers and their two-year contracts

is a no-contract plan, paid for by actual usage and able to be terminated at any time. Providers include TracFone, Ting, Consumer Cellular and others. They may promise substantial savings, but you'll have to consider your own usage patterns.

Running some hypothetical comparisons with Ting's calculators, if your actual data usage is way under the big carrier's monthly data plan limit, you might realize substantial savings by switching. If your usage usually approaches your actual limit, however, the savings don't appear to show up.

#### CHOOSE WISELY

Like a lot of business decisions, adding smartphones or switching plans may require you to make some

careful comparisons. Take the time and choose the option that best suits your needs. After all, isn't getting the best deal you can one of the smartest things you can do?

#### ABOUT THE AUTHOR

*Erik Gunn is a magazine writer and editor in Racine, Wisconsin. Readers may direct inquiries to him by contacting this publication at 800/257-7222 or emailing editor@digdifferent.com.* ▼



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BY CRAIG MANDLI

## Excavators/Excavating Equipment

### Case Construction Equipment CX350D

The CX350D excavator from Case Construction Equipment weighs 82,400 pounds with 268 hp. It has a combination of cooled exhaust gas recirculation, selective catalytic reduction and diesel oxidation catalyst technologies, which helps maximize uptime and performance while providing up to 8 percent greater fuel efficiency. The excavator has an electrically controlled hydraulic pump that controls flow based on working conditions and boosts cycle times, making them up to 12 percent faster. It has ideal cab space that provides ample legroom, a climate control system that responds to sunlight, Bluetooth radio and a fully adjustable operator's station with a heated air-ride seat. **866/542-2736; www.casece.com**



### Hyundai Construction Equipment Americas HX220L

The 51,500-pound HX220L hydraulic excavator from Hyundai Construction Equipment Americas delivers 173 net hp through a Tier 4 Final-compliant Cummins engine. It achieves up to 13 percent faster cycle speeds than the 9A Series model it replaced. An All-Around View Monitoring system for 360-degree virtual operating view is available on all HX Series models. It displays on an 8-inch cluster monitor in the operator's cab. Included in the virtual operating view is the Intelligent Moving Object Detection system that senses and warns the operator when objects come within 16.5 feet of the machine. Options include a boom float mode for improved grading control, fine swing mode for improved load control when swinging, intelligent power control for computer-aided power optimization based on load demand, and eco breaker mode for selectable pump flow and improved fuel consumption when working with hydraulic attachments.



**877/509-2254; www.hceamericas.com**

### KOBELCO SK300LC-10

The 68,100-pound SK300LC-10 excavator from KOBELCO is powered by a 252 hp Tier 4 Final HINO engine, enabling it to tackle heavy-duty applications. Its engine incorporates a selective catalytic reduction system with diesel particulate filters, which converts NOx into harmless nitrogen and water emissions; the dual system ultimately minimizes diesel exhaust fluid and decreases NOx emissions by 88 percent, while providing low operation costs. It delivers a digging force of 37,300 ft-lbs, while minimizing fuel consumption. Its hydraulic regeneration system aids the arm by reusing force generated by the boom to further minimize energy loss and ensure performance. A higher boom foot cross-section, thicker arm-foot base plate and stronger foot bases are provided for added reinforcement. A redesigned boss shape and boom foot improve overall stability while evenly distributing digging forces for durability.



**281/888-8430; www.kobelco-usa.com**

### Komatsu America Corp. PC210LC-11

The PC210LC-11 hydraulic excavator from Komatsu America Corp. is powered by a 165 hp Tier 4 Final SAA6D107E-3 engine. It comes with a viscous fan clutch for improved cooling, three travel speeds, and heavy standard counterweight (9,634 pounds) for improved over-the-front and over-the-side lift capacity.

**847/437-5800;**

**www.komatsuamerica.com**



## Loaders

### John Deere 333G

The 333G compact track loader from John Deere has a refined vertical-lift loader boom design that rises higher, reaches farther and lifts more for quicker and easier loading. The height to hinge pin is 11 feet, enabling operators to easily load dump trucks, feed mixers, fill hoppers and everything in between. The new lift path extends an additional six inches from the machine. Increased rated operating capacities of up to 3,700 pounds give it the muscle needed to master heavy loads, coupled with a breakout force that has been increased by 40 percent to make lifting heavy loads easier. Increased auxiliary hydraulic flow and power on the large frames means customers can make the most of an even broader range of attachments for a wide variety of work. Universal Quik-Tach enables users to go from bucket to forks and more in seconds.



**800/503-3373; www.johndeere.com**

### Volvo Construction Equipment H-series

H-series wheel loaders from Volvo Construction Equipment come with Torque Parallel linkage, delivering high breakout torque and parallel movement throughout the entire lifting range. They have an intelligent load-sensing hydraulic system that drives power to the hydraulic functions according to demand, for fast response, shorter cycle times and reduced fuel consumption. An optional boom suspension system absorbs shock and reduces bouncing and bucket spillage. Heavy-duty planetary axles ensure long life in tough conditions, and the front and rear 100 percent differential locks have a dog clutch design to improve grip and maintain maximum traction on all terrain. The certified ROPS/FOPS cab has ergonomically placed controls, climate control system, all-around visibility and low internal noise levels.



**828/650-2000; www.volvo.com/constructionequipment**

## Safety Equipment

### Brass Knuckle Protection Vader Combo

Vader Combo vented splash goggles from Brass Knuckle Protection help fight fog, impact and spray-back. Their integral face shield offers full-face protection with anti-fog properties. They combine a D3-rated dust and splash protection





goggle with an ANSI Z87.1+ impact-rated, hard-coated polycarbonate face shield. The goggle has N-FOG anti-fog coating, ensuring anti-fog protection that exceeds by 15 times the only existing anti-fog standard (European EN 166/168).

770/674-8930; [www.brassknuckleprotection.com](http://www.brassknuckleprotection.com)

### ScreenCo Systems Folding Tripod Lifter

The Folding Tripod Lifter from ScreenCo Systems helps prevent painful and costly back injuries, easily lifting stubborn and heavy septic and pump chamber lids. The all-aluminum unit has a lifting capacity of 600 pounds, with an 800-pound winch and auto-brake. It includes 20 feet of 3/16-inch galvanized cable, or is available with a 1,200-pound winch that holds 50 feet of cable. A stainless steel cable option is also available. Three versions of the unit are available, with 4-, 5- or 6-foot legs. The 4-foot model weighs 28 pounds and can be stored upright in service vans. The 5-foot model fits on the hose deck of most trucks, while the 6-foot model can be used to lift heavy pumps from pump chambers. All models have aluminum footpads with cleats for solid footing on soft soils.



208/790-8770; [www.screencosystems.com](http://www.screencosystems.com)

## Skid-Steers/Attachments

### Ditch Witch SK1050

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800/654-6481; [www.ditchwitch.com](http://www.ditchwitch.com)



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# Increasing Safety Through Fleet Tracking

## FLEET MANAGEMENT PROGRAMS OFFER EMPLOYERS AND DRIVERS MANY OPTIONS TO HELP THEM STAY SAFE ON THE ROAD

BY DOUG DAY

Companies around the world are using fleet tracking systems to improve their financial performance. Many of them, however, may be missing opportunities to make work safer for employees by using features and data available through the same fleet management technology.

“In the construction industries, fleet management should start with safety,” says Ryan Wilkinson, chief technology officer for Vehicle Tracking Solutions in Commack, New York, which has offered its Silent Passenger fleet management service since 2002. “Companies always want to find ways to increase the bottom line, be more efficient and be more productive. Fleet management will certainly do that for you.”

**“YOU HAVE TO LOOK AT THIS AS A WAY TO IMPROVE UPON BEST PRACTICES, MANAGING AND OPTIMIZING YOUR OPERATIONS WHEN IT COMES TO SAFETY.”**

Ryan Wilkinson

It can also help companies monitor things that increase the risk of vehicle accidents and personal injuries. One of the objections in the past to using fleet management systems for monitoring drivers is the Big Brother aspect of it. Wilkinson understands that reaction, saying it should not be used as a punitive measure or as a watchdog. “You have to look at this as a way to improve upon best practices, managing and optimizing your operations when it comes to safety,” he says. “Driver safety has become a core piece that every company is responsible for today.”



Silent Passenger includes a speed management component, but Wilkinson says fleet management can do a lot more to help companies, and drivers, increase safety. “With our software you can monitor vehicle speeds against the posted speed limit, you can see the posted speed limit and average driving speed. The system records idle time (for fuel management), but can also monitor seatbelt usage, and hard braking and acceleration, which could be signs of driver issues.”

The software also allows companies to record incident reports immediately in the field, do hazard assessments of work sites, track employee safety and training history, conduct safety meetings, and track driver’s licenses. “Those are things that make fleet management software work more effectively,” he says.

The key, stresses Wilkinson, is to use the information to reward good behavior rather than reprimanding bad behavior. He says his firm has helped companies use the data to create driver scorecards to provide a broad measure of safety and encourage safe driving. “It can be used as an incentive for drivers,” he says. “If your driver scorecard is more than 90 for the month, maybe you get a day off or a gift. We are trying to find ways to make it more company-focused, where there is a benefit for drivers and they can be part of the solution instead of looking at them as part of the problem.”

Besides reducing accidents and the associated costs such as lost employee time, vehicle repairs and increased insurance costs, improved driving habits also add to the bottom line by improving vehicle and dispatch efficiency. “We’re stressing more and more every day, and try to get very involved in reminding our customers, how critical safety is as part of the business they run.” ▼

**What’s trending in alternative excavation?**

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**Working in the Oilfields**

**ALBERTA COMPANY USES TORNADO HYDROVACS TO HELP WITH OILFIELD WORK**

**M**AD Oilfield Solutions, based in Lac La Biche, Alberta, used two Tornado hydroexcavators to hydrovac a pipeline for inspection and maintenance work in late December in northern Alberta.

MAD Oilfield Solutions, owned by Corey Madill and Claude Bourassa, is a family-run business with 33 years' experience. The company has many satellite offices offering a range of services including: fluid hauling, vacuum services, industrial cleaning, high-pressure and turnaround services.

Other equipment owned by the company: industrial vacuum units (tri-axle drive trucks with a quad wagon unit, a tri-axle drive tractor with a tri-axle trailer, and tandem-axle with tri-axle trailer semi vacs), tri-axle drive body vacuum trucks, sour sealed water units, steamer units, pressure units, combination units, tankers, hydro-testing trailers, hot oiler, chemical unit, and several service trucks.



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## THE LATEST: News

### Muncie Power Products M-Power Tech available in Spanish

Muncie Power Products announced that its online power take-off and mobile hydraulic system training program, M-Power Tech, is now available in Spanish. M-Power Tech users can access the online program from anywhere and complete lessons at their own pace.

### Generac to acquire Motortech Holding

Generac announced that they entered into an agreement to acquire the assets of Motortech Holding, headquartered in Celle, Germany. The transaction, subject to regulatory approval, is expected to close in the first quarter.

### Michels adds sewer and catch basin cleaning

Michels Pipe Services recently purchased eight Camel 1200 wastewater recycling sewer and catch basin cleaning trucks to become the largest owner of the equipment in the



John Manijak

U.S. John Manijak, business development manager, who has more than 17 years' experience in the municipal sewer cleaning industry, will coordinate the expanded services from Michels' regional office in Montgomery, Illinois.

### JCB honored with AEM's Pillar of the Industry award

The Association of Equipment Manufacturers has honored JCB North America with its Pillar of the Industry award for the second year in a row. The award reflects the company's work to educate the men and women of the equipment manufacturing industry about the issues that matter for manufacturers during the election season.

### Hilti North America president and CEO Cary Evert to retire in 2017

Cary Evert, president and CEO of Hilti North America, will retire March 31. Over his almost four-decade career, Evert has held nine different roles after first starting with the company in 1980. He has served as president and CEO since 2005. ▼

## Happenings

### CALENDAR

#### March 4-6

**AEMP 35th Annual Conference**, Tuscany Suites & Casino, Las Vegas. Visit [www.aemp.org](http://www.aemp.org)

#### March 4-6

**National Utility Contractors Association (NUCA) Annual Convention**, Palms Casino Resort, Las Vegas. Visit [www.nuca.com/convention](http://www.nuca.com/convention)

#### March 7-11

**CONEXPO-CON/AGG**, Las Vegas Convention Center, Las Vegas. Visit [www.conexpoconagg.com](http://www.conexpoconagg.com)

#### March 14-16

**Common Ground Alliance (CGA) Excavation Safety Conference & Expo**, Rosen Shingle Creek, Orlando, Florida. Visit [www.cgaconference.com](http://www.cgaconference.com)

#### March 23-25

**Mid-America Trucking Show**, Kentucky Expo Center, Louisville, Kentucky. Visit [www.truckingshow.com](http://www.truckingshow.com)

#### April 6-7

**National Heavy Equipment Show**, International Centre, Mississauga, Ontario. Visit [www.nhes.ca](http://www.nhes.ca)

#### April 9-13

**NASTT's No-Dig Show**, Gaylord National Hotel & Convention Center, Washington, D.C. Visit [www.nastt.org](http://www.nastt.org)

#### May 16-18

**National Utility Contractors Association (NUCA) Washington Summit**, Embassy Suites, Washington, D.C. Visit [www.nuca.com/summit](http://www.nuca.com/summit)

#### June 4-7

**Electric Utility Fleet Managers Conference (EUFMC)**, Williamsburg Lodge and Conference Center, Williamsburg, Virginia. Visit [www.eufmc.com](http://www.eufmc.com)

#### June 4-7

**Rapid Excavation and Tunneling Conference (RETC)**, Hyatt Grand Manchester, San Diego. Visit [www.retc.org](http://www.retc.org)

#### June 9-15

**World Tunnel Congress (WTC)**, Grieghallen, Bergen, Norway. Visit [www.wtc2017.com](http://www.wtc2017.com)

#### June 19-22

**ASSE Professional Development Conference & Exposition**, Colorado Convention Center, Denver. Visit [safety.asse.org](http://safety.asse.org)

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