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MARCH 2024



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A PASSION FOR SERVICE

TEAM RUBICON PITCHES IN TO HELP CLEAN UP AND RESTORE COMMUNITIES RAVAGED BY STORMS AND OTHER DISASTERS

» PAGE 8



PRODUCT FOCUS

Sand/Sludge Removal

» PAGE 22

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With military-style organization and armies of volunteers, Team Rubicon pitches in to help clean up and restore communities ravaged by storms and other disasters.

By Ted Rulseh

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Assembled and fit out to serve communities across the globe, Team Rubicon is a band of volunteers made up of determined military veterans, reservists, National Guard members, first responders and skilled civilians. (Photography by Team Rubicon)



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Tim Dobbins
EDITOR

A Herd of Buffalo

The buffalo is a fascinating animal, and a fitting symbol of disaster recovery workers

There's a metaphor about buffalo and cows that says both species can sense when a storm is coming. A cow's instinct is to run in the opposite direction of the storm. Buffalo, however, run directly at it.

When running away from the storm, cows eventually tire, which allows the severe weather to catch up with them. Regardless, they keep moving in that same direction, prolonging their length of suffering. Buffalo meet the challenge head-on and run directly toward and through the commotion, and as such, they exit the turmoil much faster.

I don't need to spell out what animal I relate those in this industry to. Disaster recovery is composed of individuals who literally travel headfirst toward storms in an effort to shorten the hardships of entire communities.

SERVICE FOR ALL

In this issue, you'll learn about a special group of people who embrace this exact philosophy: Team Rubicon, a nonprofit organization founded in 2010 by U.S. Marine Corps veteran Jake Wood. It's a nationwide organization dedicated to serving before, during and after disasters. Understanding strength in numbers, the herd that makes Team Rubicon has grown over the years to more than 160,000 volunteers. Their mission is always to deploy where needed, with no disaster too big nor too small.

A quote found on their website which reminded me of the mentioned parable says, "We call on the bold, the tenacious, the relentless to look failure in the face and forge ahead, unflinchingly."

Their mission and the buffalo metaphor apply beyond the direct comparison to charging storms. The courage to take on challenges applies to a lot of things in life, including starting a new business, or selling part

of a company to expand on a different career avenue like John Ritter does in this issue's Powered By column.

MAKING THE TEAM

Another statement on Team Rubicon's website says, "We are better together, period. And when we play to each other's strengths, we are a force to be reckoned with." This is something that I believe rings true of the entire industry.

I've heard a few times now in my talks with contractors that they aren't sure if their business is big enough to feature in the magazine because they have only done a few disaster recovery projects, or that their primary business isn't disaster-focused and recovery jobs are only done as needed.

No matter the frequency of cleanups or size of your crew, you add to the entire effort and solution, and we want to learn about it. Like Team Rubicon says, "We are better together, period." So no matter what your role is, please reach out and share it with us.

This industry is built on challenging scenarios, but thanks to all the buffalo charging them head-on, there is always light at the other end of the storm for cities, townships, businesses and homeowners. Enjoy the issue. **D**



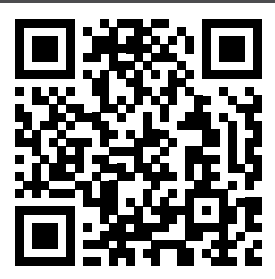
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DCR Contractor strives to serve those on the front lines of disaster cleanup and recovery with interesting and helpful stories. We welcome your comments, questions and column suggestions and promise a prompt reply to all reader contacts. Call 800-257-7222 or email DCR editor Tim Dobbins at editor@dcrcontractor.com.

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» SCAN ME



NET SURFING Sharing The Best Disaster Related Content

We're always on the lookout for relevant and interesting disaster recovery content. In our e-newsletters, we regularly share and highlight news stories and social media posts that we are reading and watching, [like this article that discusses why 2023 was a bizarre year for wildfires.](#)

W Like it or not, AI is here with us, and doesn't seem to be going anywhere anytime soon. Rather than fearing AI, businesses can embrace its most useful features."

– Simple Steps for Safe Excavation
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GRABBING DEBRIS Step One To Full Restoration

Debris removal is a multifaceted challenge that requires specialized expertise, equipment, and a coordinated effort to pave the way for rebuilding and renewal.

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ICED OUT Contractors In High-Demand

Ice, snow and wind in the Portland, Oregon area have many local schools shut down and waiting for repair. Funding and contractors are in short supply for the demand.

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SPOTLIGHT

by Cody Wiesner

AMPHIBIOUS TRANSPORT VEHICLE CAN REACH HARD-TO-NAVIGATE JOB SITES

Disaster recovery crews who routinely encounter hurricanes, flooding and wayward debris know that the choice of service vehicle is a crucial one. Amphibious, off-road and versatile, FAT TRUCK by Zeal Motor is specifically designed to transport people and equipment to and from rugged job sites.

“Where the pickup [truck] stops, we continue,” says Amine Khimjee, Zeal Motor vice president of sales and marketing. “Muddy areas, flooded areas, icy, hilly areas ... you need to go over obstacles? The vehicle will be able to tackle that and more.”

FAT TRUCK is named for the hefty set of tires equipped with hydraulic motors that propel the vehicle onward through challenging terrain, cruising up to 25 mph on land and 3 mph floating on water. In addition, internal air compressors allow operators to adjust tire pressure according to the terrain, accessible through an automatic push-button design.

“Those wheels have only between 2 and 4 psi in them,” Khimjee says. Despite payloads of half a ton up to 5,000 pounds, depending on the model, a FAT TRUCK driving has a lighter footprint than a person walking, says the manufacturer.


Zeal Motors expanded its lineup last December to a five-vehicle fleet, including the 2.4 Pickup, 2.8 Pickup, 2.8 Wagon, 8x8 Hauler and 8x8 Wagon.

Khimjee says, at a glance, “If you need to transport a lot of people, then the 8x8 [trucks are] the solution. If you want something, just to get on a job site and work, or just to rescue people, the 2x8 platforms are the best. And if you want something narrow and compact, then use the 2x4.”

The 8x8 trucks, which hitch to a hauler or wagon rear car, are also designed to transport materials to difficult-to-reach job sites at a 5,000-pound payload.

Expanding on previous models, the 2.8 Pickup and Wagon boast a new 74 hp Hatz 1.95L Turbo diesel engine, Power Take Off capability and an overall 11% power increase, all in a quieter cab. Contractors can also expect safety features to confront natural disasters, such as impact-resistant windshields, sliding side windows and, across all models, front-end entrances.

“When you have an emergency situation, you can have winds blowing up to 30 mph,” Khimjee says. “Before it was a door that was opening sideways like a car, and we changed that.”

The FAT TRUCK is ROPS-certified, EPA-compliant and designed with OSHA, ASME, ANSI, ISO and SAE standards in mind. **579-594-2794; www.fattruck.com** 



A PASSION FOR SERVICE

WITH MILITARY-STYLE ORGANIZATION AND ARMIES OF VOLUNTEERS, TEAM RUBICON PITCHES IN TO HELP CLEAN UP AND RESTORE COMMUNITIES RAVAGED BY STORMS AND OTHER DISASTERS

By Ted J. Rulseh | Photos provided by Team Rubicon

Hurricane Idalia left gaping wounds in the landscape while roaring across the Southeast U.S. in late August 2023.

Its 125 mph winds tore roofs off buildings, toppled and splintered trees, and flooded roads across parts of Florida, Georgia and South Carolina. It also largely faded from the news cycle after two days.

But volunteers from Team Rubicon, a veteran-led humanitarian organization, didn't fade away. They arrived immediately after the storm to help with cleanup

and were still there two months later, helping residents rebuild their homes and clearing away trees that leaned on houses and blocked driveways.

The volunteers, more than 400 strong, supervised by paid staff, did work worth hundreds of thousands of dollars, at no charge, that would not have been covered by residents' insurance. It's just one example of how the nongovernment organization Team Rubicon steps up to help communities in need.

In 2023 alone the organization responded to some

« Volunteers are all smiles after knowing they are making a difference at the scene of a recent wildfire.

120 disasters of various sizes. It operates with a tight structure that befits the makeup of its volunteer force — about 50% military veterans, reservists and National Guard members, and 50% first responders and skilled civilians. Key focus areas include removing debris from roadways and doing expedient repairs to make damaged homes at least minimally habitable as quickly as possible.

“For things like emotional or spiritual care, or feeding and sheltering, there are experts like the Salvation Army and the Red Cross,” says William Porter, director of operations support. “We much prefer to be out sawing down trees, tarping roofs, mucking out houses, just generally sweating it out and getting dirty. Our mantra is: Do what we do best, partner for the rest.”

IN THE SHADOWS

Team Rubicon tends to operate outside the limelight. “Our CEO Art delaCruz says we’re the biggest organization that no one has ever heard of,” observes Devon Miller, senior associate in communications. That low profile belies the scope of the organization’s impact.

A team at the group’s National Operations Center monitors threats and looks at the impacts of natural and human-caused disasters, says Porter, an Air Force veteran and former law enforcement officer who joined Team Rubicon as a volunteer in 2012 and has been on staff for eight years.

“Once we see that there is a disaster



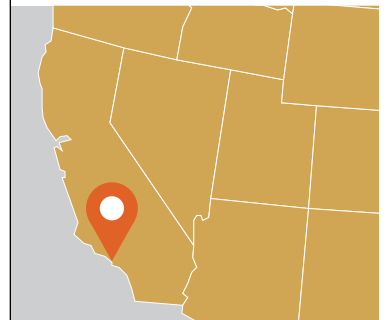
ter or some incident affecting a community we assess whether there’s an opportunity for us to help,” Porter says. “We determine whether there are unmet needs, whether we have capabilities we could bring to bear, and ultimately whether we have the necessary resources.

“If the answer is yes to all three, we go forward and get our people on the ground as quickly as possible. We try to respond in as many places as we can.” Sometimes fire chiefs, police chiefs, mayors, governors, and FEMA officials reach out for assistance.

In all cases Team Rubicon coordinates with charitable organizations, governments, first responders and others. “We belong to National Voluntary Organizations Active in Disaster, which has more than 130 members,” says Porter. “There are also VOADs in all 50 states and six territories. We’re there to communicate, coordinate and collaborate.”

Typically the state VOAD has a representative on the scene. “We reach out to that person, let them know we’re

Tree debris is an issue following most every disaster. Team Rubicon Greyshirts use a Stihl chain saw to make short work of this tree.



TEAM RUBICON

Los Angeles, California

OWNER:
Jake Wood

FOUNDED:
2010

SERVICES:
Incident management, site surveys, disaster mapping, debris management, hazard mitigation, expedient home repair, volunteer management, emergency medicine, demolition, exercise services.

SERVICE AREA:
Worldwide

WEBSITE:
www.teamrubiconusa.org

WE MUCH PREFER TO BE OUT SAWING DOWN TREES, TARPING ROOFS, MUCKING OUT HOUSES, JUST GENERALLY SWEATING IT OUT AND GETTING DIRTY.”

– William Porter



▲ A scene of destruction in the background of Team Rubicon volunteers tarping a storm damaged roof.

WE ARE AN INDUSTRY LEADER IN MOBILIZING. WE COMMIT THAT WE CAN PUT 100 VOLUNTEERS ON THE GROUND ANYWHERE IN THE WORLD IN 24 HOURS.”

– William Porter

» Greyshirts using a Vermeer BC100XL to clean up debris after storms downed numerous trees and limbs.

coming, and describe the scope, scale and duration of our potential operation,” Porter says. “Concurrently we talk to the state emergency manager as well as the county or local emergency manager.”

FILLING THE NEED

Team Rubicon targets communities or parts of communities not already being served by others. Often that’s an area where residents are less affluent. Sometimes it’s simply a sector

within a large disaster zone that other NGOs have not yet reached. At other times the focus might be on people who are socially vulnerable: the elderly or people with mental or physical disabilities.

“Maybe they don’t have mobility,” says Porter. “Maybe they need a new wheelchair ramp or their specially adapted driveway is blocked by a tree. By default there are not a lot of resources available to them. We try to prioritize their requests for service.”



Sometimes identifying those in need means going door to door and asking residents if they require assistance.

Once needs are identified, Team Rubicon can marshal significant resources, chiefly its more than 160,000 volunteers, known as Greyshirts. "Over the years we have honed our craft," says Porter. "We are an industry leader in mobilizing. We commit that we can put 100 volunteers on the ground anywhere in the world in 24 hours."

Volunteers in the target area are notified by emails and texts and are asked to register their availability. Team Rubicon books their transportation and lodging as well as reimburses them for food, parking for personal vehicles, and other expenses. "They are providing their most critical and important resource, which is time, so we try to take care of everything else," says Porter.

EQUIPPED TO SERVE

Volunteers are outfitted with an impressive array of physical assets. Through a partnership with CASE Construction Equipment (see sidebar), the organization receives heavy machinery on loan from nearby dealerships. Its owned inventory includes five CASE compact track loaders and one skid-steer.

Shower trailers enable personnel to maintain good hygiene. Two large mobile command centers serve as headquarters for team members in the field. Under construction are four mobile forward operating bases with generators, air conditioning, lighting and sleeping quarters for up to 30 people.

"That way, we won't have people searching for gyms, YMCAs or churches to lodge in because the hotels are either full or closed down," says Porter. "We'll be able to get people on the ground and working even quicker than we do already."

MACHINERY ON DEMAND

It takes serious muscle to clear roadways of trees blown down in storms. When facing that challenge, Team Rubicon turns to dealers for CASE Construction Equipment, who supply compact track loaders and skid-steers, along with root grapples and other attachments as appropriate to the task at hand.

The partnership dates back to 2015. Since then CASE dealers have provided equipment for about three dozen disaster cleanups in which Team Rubicon has lent assistance, according to Rebecca Bortner, director of marketing for CASE North America. CASE also makes its training facilities available for Team Rubicon to teach volunteers to be equipment operators.

CORPORATE BACKING

It's one of several corporate partnerships that help Team Rubicon carry on its mission of supporting disaster relief across the United States and sometimes abroad. The organization draws the bulk of its funding through donations from companies and foundations. They include the CNH Industrial Foundation, the charitable arm of the CASE parent company, CNH Industrial, in North America.

"The foundation chose to partner with Team Rubicon in 2017 and since then has granted over \$1.5 million to them," says Michelle Javaherian, community impact manager with CNH and an officer of the CNH Industrial Foundation. She notes that disaster relief is an important pillar of the foundation's mission.

Other significant contributors of physical assets to Team Rubicon include the following:

- Ford vehicles, including F-150s, F-250s and Broncos.

- Tyson Foods, which built, stored and moves two large mobile command centers
- Under Armour, funding for four SPE-VCO forward-operating base trailers with showers and barracks for up to 30 Greyshirts.

CASE CONNECTION

Bortner says CASE support for Team Rubicon aligns with the company's broader purpose around building communities: "It provides an awesome opportunity for our dealers to serve and work together to give back to communities that need to be rebuilt. They are passionate about what Team Rubicon does, and they understand that when they get a call for equipment, they need to make it a priority."

When in need of machinery, Team Rubicon sends an email to CASE describing the project, the location, and the items required. CASE team members then reach out to the nearest of the company's 66 construction equipment dealers, who locate the machines and arrange for transport to the work site and back.

The machines most often requested are compact track loaders with root grapple or grapple bucket attachments for tree removal. Others include skid-steers and compact excavators. Dealers typically draw equipment from their rental fleets or used machine inventory.

Bortner notes that dealers are so eager to help that when a storm or other disaster happens in or near their territory, "They contact us even before Team Rubicon does. It's the shared passion that we and our dealers have of giving back to the community."

» A team member fastening chains that secure a CASE compact track loader on a trailer



MORE INFO

CASE Construction Equipment
866-542-2736
www.casece.com

Stihl Inc.
800-467-8445
www.stihlusa.com

Vermeer Corporation
www.vermeer.com

» A CASE TR310 compact track loader with grapple attachment clearing a mountain of debris from the doorway of a home.



The fleet also includes four dozen 16-foot-long double-axle response trailers stationed around the country with enough gear to outfit 30 volunteers for a week. They include strike team kits with hand tools; roofing kits with harnesses, fall protection, rope and tarps; Stihl chain saws and a pole saw; and basic office supplies.

COMMAND AND CONTROL

Teams in the field function under

the National Incident Management System Incident Command System framework. The top-level structure includes an incident commander supported by logistics, planning and operations section chiefs, a public information officer, and a liaison officer.

“Beneath those, depending on the operation’s size and complexity, we can add more layers of leadership,” Porter says. “On the front lines, we have strike team leaders with teams of four to seven people who do the physical work. The leader makes sure people are working safely, taking breaks and working at the right place to get residents back in their homes.”

Leaders stay in touch with volunteers using a suite of technology that includes satellite communications, mobile radios and cellphones from major carriers. Volunteers in the path of storms are outfitted with satellite communicators and personal locator beacons to track their movements. Teams are also outfitted with a Life360 locator app.

Volunteers come well prepared: Team Rubicon provides extensive training that includes distance learning courses available on demand. Team members can take a TR 101



course introducing the organization. Other courses cover chain saw basics, site surveys, heavy equipment operation, and much more. Two-day instructor-led courses cover topics such as incident command systems and how to function as a planning or operations section chief.

Training helps keep volunteers energized and engaged during downtime. So do social events like cookouts, along with service projects such as park cleanups and work on Habitat for Humanity housing projects.

NO JOB TOO SMALL

Team Rubicon has worked on a number of large-scale disasters — Hurricane Harvey in Houston, Ida in Louisiana, Maria in Puerto Rico, major floods in Kentucky, to name a few. But it doesn't turn away from more localized events.

Porter observes, "There's no such a thing as a small disaster because someone affected by an event feels the same way, whether it's one person, or 3,000 or 30,000. We understand risk versus reward and cost versus benefit. We don't deploy, as an example, 100 volunteers to work on a few homes because that's not very efficient. But


we have done operations where we responded to a single home.


"We want the best-fitting resource to help survivors on their worst day. By doing that we help them get back into their homes as quickly as possible, and keep them from having to stay in a shelter longer, which generally isn't fun. What we don't want is to apply our resources over the top of another NGO and duplicate resources. That never helps anyone."

BEYOND CLEANUP

Team Rubicon's approach and capabilities were demonstrated in the response to Hurricane Idalia, which struck Aug. 30, 2023. The storm's main impact was blown-down trees. Because widespread news coverage of the event was of relatively short duration, response from other NGOs and donations to those groups were somewhat limited, Porter observes.

Volunteers from Team Rubicon immediately went to work clearing trees from roadways using compact track loaders provided by CASE dealer Tidewater Equipment and CASE Power & Equipment of Florida. More challenging was removing fallen and damaged trees on residents'

 Team Rubicon volunteers preparing a fleet of Stihl equipment and a CASE compact track loader following Hurricane Ian.

 Volunteers work to remove a tree that fell near a home.





SEMPER SERVIENTES (ALWAYS SERVING)

Team Rubicon grew out of one man's determination to help people in need.

In 2010 Jake Wood, a U.S. Marine Corps veteran, felt compelled to act when an earthquake devastated Haiti. "While other relief organizations hemmed and hawed," says the Team Rubicon website, "Wood led a team of seven into action. That small, scrappy team cared for thousands of survivors, broke the mold of humanitarian aid and proved that we can always do more."

That action planted the seed for Team Rubicon, now a charitable organization that spans North America and also works overseas. It brings relief to vulnerable populations before, during and after disasters strike, focusing on communities and people otherwise underserved.

Team members help create and implement preparedness plans for communities at risk of floods, fires and other events. After disasters they clear roadways, remove debris and address people's immediate needs for safe shelter. Afterward they often stay to help residents rebuild.

The organization now includes more than 160,000 volunteers known as Greyshirts, 205 full-time paid team members, and an annual budget of about \$50 million.

Team Rubicon crew members at base camp talking logistics and recovery plans.

properties. Homeowners' insurance typically covers removal of trees that have damaged or threaten the primary dwelling, but not those that have fallen on fences, across driveways or on the lawn, Porter observes.

"When a hurricane comes through, it's going to lop off the tops of the trees," he says. "It will take off the tree canopy, break the branches and may completely tip the tree over. Often, some very large branches will be hanging off. You have large branches weighing in excess of 100 pounds that could fall at any moment.

"As a homeowner, you're trapped in your home because at any point with just the right wind, one of those widow makers could dislodge and earn its name. In Idalia, our primary response was doing work that insurance companies would not cover and that people couldn't pay for out of pocket. We were saving homeowners tens of thousands of dollars by doing the chain saw work for free." Team Rubicon was still on the scene two

months after the storm, when many other NGOs had gone home.

In the aftermath of other storms, the main focus is making homes functional as soon as possible, especially for people who are uninsured or underinsured. Depending on the situation, that could mean stripping a flood-damaged home down to the studs, tarping the roof to keep more water out, and doing other basic repairs. "It's not going to be the prettiest, but it will be safe and secure housing that people can stay in rather than go to a hotel or a shelter," says Porter.

In other cases volunteers may rebuild homes with new flooring in, dry-wall and insulation, windows, kitchen countertops, appliances, and more.

Porter concludes, "We are the largest, and we deploy the most volunteers to these disasters. We deploy more people, we stay longer, and generally speaking we help more people. We try and help as many as possible, for whatever duration of time, and whatever funding we have." **D**

» John Ritter, owner of Ritter Company's landscaping division



Diversity From Debris

Tornado provides the gateway for an Ohio company to expand offerings

By Giles Lambertson | Photos provided by Vermeer

John Ritter is OK with change. He began his career doing plumbing and utility work, segued into directional drilling pipeline projects and, when storm debris led to an opportunity to supply landscape materials, he jumped into that too.

Ritter Plumbing Company dates back to 1950 and was founded in Englewood, Ohio, by Ritter's father Phillip Ritter II. Almost 30 years later, when John Ritter graduated from high school, he joined his father and brother, Phillip III, in the family business which had moved 10 miles away to Brookville.

Over time, the company broadened its specialty — repairing and installing underground water and natural gas lines — to

include electric conduit and eventually horizontal directional drilling.

Yet through all the changes, the Ritters have valued their Vermeer equipment, relying on the brand for three decades. Ritter Company purchased 10 HDD units throughout the course of offering the service, all from Vermeer.

Business was good, but Ritter was ready for a shift. He sold the company to his brother's son, Phillip Ritter IV, who has since doubled the number of employees to 85. "I didn't have the desire to expand it at this stage in my career and Phil did."

Which is not to say the 63-year-old businessman retired to go deer hunting with his grandchildren and otherwise take

» Ritter Materials utilizes a multistep process, including a Vermeer HG4000 horizontal grinder and TR5300 trommel screen, to produce high-quality organic mulch from incoming waste.





« Ritter Materials utilizes an 80-foot Vector VT80 track-mounted conveyor to transport material from the trommel screen to the building, improving efficiency by eliminating the need for manual bucket loads.

it easy. Instead, he launched the landscape materials division of the family company and now devotes his energy to building it out — once again with equipment from Vermeer and this time, with added help from storm debris.

DEBRIS DOLLARS

In 2019, a Memorial Day tornado ripped through Brookville and set the stage for expansion. Ritter responded to the disaster by letting recovery crews dump uprooted trees on the same property where the soil was piled and it didn't take long for him to see the opportunity to capitalize on the material.

The company bought a Vermeer HG4000 horizontal grinder and put it to work, reducing the storm debris to 10,000 cubic yards of a coarse mulch product. Since that storm, tree trimmers, landscape companies and land developers regularly rid themselves of everything from brush to logs at Ritter's.

The mulch side of the business grew and, as it did, the handling of the product became more and more refined and systematized. Currently stockpiled on the property is roughly 7,000 cubic yards of coarsely mulched material.

The HG4000 grinder first processes wood debris by chewing it into roughage, which Ritter calls "first grind." That material is piled up and remains largely untouched

for a year to begin the composting process. Then, different perforated plates are fitted to grinder or trommel to create seven different grades of mulch ranging down to "ultra," a really fine landscape material.

AVOIDING DISASTER

One issue with piling mulched wood in such quantities is the heat generated by the microbial degeneration of the organic material. While a little heat is wanted, bursting into flame is something else. So, the material periodically is stirred to defuse the heat buildup.

John Ritter has another plan moving forward. He asked a local plumbing company to lend him a drone so he can get aerial photos of the piled material. He's looking to friends in the irrigation business for advice on how to create a spray system to discourage combustion. He plans to connect a 3-inch pipe to the city water system, run it 400 feet to the composting piles and erect four towers in strategic places to bombard the mulch with water from above.

"We're trying to keep the heat down," he says. "If you get too much heat and spark a fire on a windy day, you have a problem."

BUSINESS BREAKDOWN

Most of the ground-up wood product is from hardwoods growing in verdant northern Ohio — oaks, maples, ash.

The company continues to develop ef-

"WE'RE TRYING TO KEEP THE HEAT DOWN. IF YOU GET TOO MUCH HEAT AND SPARK A FIRE ON A WINDY DAY, YOU HAVE A PROBLEM."

— JOHN RITTER



iciencies in its operation. To help quickly move either “first grind” or finished mulch product to a respective pile, Ritter bought an 80-foot Vector VT80 conveyor. To protect its topsoil from the elements over the coming winter, he erected a 60-foot-by-120-foot domed structure that rests on 6-foot-high cement-block foundations. The conveyor can deposit a pyramid of soil 30 feet high under the dome.

“We can put 2,500 cubic yards of soil under that roof, have it here all winter and be ready for customers in the spring,” he says. A wheel loader moves the protected topsoil around under the roof as needed and, come spring, will feed the conveyor or dump the rich soil into backed-in quad-axle dump trucks.

One thing for sure, the company is not likely to run out of organic debris to mulch, Ritter says. The current breakdown of business volume is 40% mulch, 40% top-

soil and the other 20% is sand and gravel. Customers are property owners, landscape companies and small contractors. “It’s getting harder for homeowners who need just a yard or two of gravel to get into gravel pits. They can buy it from me.”

Ritter and two yard employees can operate the user-friendly Vermeer screening and grinding machines. “They are specialty-enough machines that it’s not like getting on a backhoe or something,” Ritter says, “but the remote controls for each machine are somewhat the same. It’s easy to push the automatic button, dump in material and let it do its work.”

Realizing an opportunity when tornado debris was dropped on his property and utilizing the right equipment, Ritter brought a whole new segment of income to the family business. Storms leave debris, but it doesn’t have to be waste. **D**

INDUSTRY NEWS

■ SUPER PRODUCTS SIGNS NEW DEALER AGREEMENT

Super Products has signed with Cleveland, Ohio-based MTech as a new dealer partner. MTech will serve the municipalities and contractors for the Camel, SuperJet and Mud Dog vacuum truck and hydroexcavation truck product lines in Ohio and Michigan. RNOW of West Allis, Wisconsin, will retain responsibility for municipalities in the western half of Michigan’s Upper Peninsula.

■ CASE CONSTRUCTION DEALER EXPANDS ALONG THE GULF COAST

CASE Construction Equipment dealer Lee Tractor announced it is expanding its business along the Gulf Coast to the Pensacola, Florida, area effective immediately. With current locations in Biloxi and Jackson that service southern Mississippi and a location in Saint Rose that supports the New Orleans market, Lee Tractor will now expand its service area into the western Florida panhandle, including coastal Alabama. Lee Tractor will sell and service the full lineup of CASE heavy, compact and subcompact equipment and attachments while also offering complementary services, including financing, rentals, planned maintenance solutions, telematics and parts support. **D**



DCRCONTRACTOR.COM





By Stormy Shafer

Buy Boards for Recovery Contractors

Get certified ahead of time as an approved disaster recovery contractor/vendor

WHETHER YOU'RE A VETERAN INDUSTRY CONTRACTOR OR JUST TRYING TO BREAK INTO THIS CONTRACTING NICHE, IT PAYS TO KNOW THE VARIOUS TYPES OF CONTRACTING CERTIFICATION AUTHORITIES.



The best time to get on a contracting authority's radar at a disaster recovery site is not after the disaster has already happened. Contractors must proactively apply/register to become an approved vendor on the emergency services equivalent of construction and non-emergency contractor "buy boards."

Properly referred to as Cooperative Procurement programs, there are many benefits to local, regional, state and federal governments for using them. These include reduction of staff procurement time, cost savings through volume price discounts, leveraged concessions, and reduced risk through extended warranties and insurance provisions. Not all buy boards or contractors taking part in them offer such concessions and warranties, but they are often factors in such participation.

Whether you're a veteran industry contractor or just trying to break into this contracting niche, it pays to know the various types of contracting certification authorities, whose call lists you need to be on if you hope to gain post-disaster contracts, and how to get on those lists.

These potential contractor/vendor lists/boards/co-ops vary by region, site authority and disaster type, like natural vs. human-caused disasters. That means there are many for potential contractors to become aware of, learn how to use, and join. Let's first look at the three main types of procurement there are, and how you may fit into each.

TYPES OF GOVERNMENT PROCUREMENT

Not every state recognizes or has the same names for these three types of procurement agreements, but most recognize some form of similar categories. They include the following:

- **JOINT COOPERATIVE PROCUREMENTS (LIMITED)** – Solicitations in which participating governmental bodies or cooperative procurement groups to the contract are named in the procurement and resulting contract. Use is limited to identified participants only. Other governmental bodies may not later use the resulting contract. Joint cooperative procurements require participants to enter into a formal intergovernmental agreement, with an administrator executing the agreement on behalf of the cooperative procurement group.
- **PERMISSIVE COOPERATIVE PROCUREMENTS (UNLIMITED)** – Contracting governmental bodies are not specifically named individually in the procurement and resulting contract. The contract requires contractors to extend the terms, conditions and pricing of the original contract to an administrator and all interested participants. Participants may not make material changes to the contract terms, conditions or prices.
- **INTERSTATE COOPERATIVE PROCUREMENTS (HYBRID)** – A form of permissive or joint Cooperative Procurement

in which an administrator, or one or more participants, are located outside of the contract's originating state. For an agency to use an interstate cooperative procurement, the administrator must be a governmental body authorized under the laws, rules or regulations of that jurisdiction to enter into public contracts.

Obviously, most disaster recovery contracts will be one of the first two types because the physical scope of the cleanup and restoration is limited to a local or state jurisdiction. However, inter-regional and interstate efforts, such as those required for a very large natural disaster such as a hurricane or multistate severe weather outbreak, may require the third type.

ANOTHER QUITE VIABLE OPTION

A fourth type of disaster cleanup and recovery contract is the strictly local, one-time, spontaneous kind that typically originates in a heavily rural, more sparsely populated region of limited geographic scope. This likely covers the greatest percentage of the United States, in which small communities have tiny governance budgets and emergency management agencies that typically consist of all or mostly unpaid volunteers. These areas tend not to have the resources for much disaster preplanning, and most likely respond to disasters on a one-off basis, relying on state-level intervention using official disaster area declarations to help them cope with large or more devastating disasters.

This type may be most appealing to contractors just getting started and needing to cut their teeth on smaller, more easily managed scenarios. Such situations permit new contractors to gain experience and knowledge that can't be taught in simulated training before attempting to tackle larger contracts. This is not only smart strategy on the tactical side, but also allows contractors to gradually build their reputations and figure out their service specialties at a more manageable level,

while getting to know who's who among local movers and shakers.

Being savvy about both buy boards/procurement program registration monitoring and establishing ongoing relationships with local officials is important, especially if the contractor is rural and/or woman-, minority- or veteran-owned, because those companies do garner preference in those areas which still honor affirmative action requirements.

In a future column, we'll discuss some of the more prominent, typical cooperative procurement programs, and what's entailed in getting registered with them. ▣

THE AUTHOR SERVED 13 YEARS WITH AN EMERGENCY MANAGEMENT AGENCY

for a tiny township of about 1,300 people in very rural Pennsylvania. They were all volunteers, and nearly every team member wore several hats.

They had no real disaster budget, so tended to just work with known quantities as far as emergency services contractors went, on an individual event basis. In more common disaster situations such as riverine flooding, the crew generally tended to work with local contractors, the same ones over and over again.

But in large-scale, more complex situations — such as recovery from Superstorm Sandy in 2012 — everyone in the entire region was overwhelmed with need, and there wasn't enough local help available. So they ended up requesting help from their county and state EMAs, which all work with pre-registered contractors via cooperative procurement programs.

A FOURTH TYPE OF DISASTER CLEANUP AND RECOVERY CONTRACT IS THE STRICTLY LOCAL, ONE-TIME, SPONTANEOUS KIND THAT TYPICALLY ORIGINATES IN A HEAVILY RURAL, MORE SPARSELY POPULATED REGION OF LIMITED GEOGRAPHIC SCOPE.





By Sara Heger, Ph.D.

The Role of a Competent Person

Whether a routine dig, or spur-of-the moment recovery job, a properly trained supervisor is a must-have

THE COMPETENT PERSON IS RESPONSIBLE FOR GENERAL SAFETY REQUIREMENTS, BUT IN PARTICULAR, THE COMPETENT PERSON IS RESPONSIBLE BY LAW FOR CLASSIFYING THE SOIL ON THE SITE.



Every person on a job site is responsible not only for his or her own safety, but also the safety of those around them. When safety is the most important goal on the site, everyone gets to come back to work the next day. Small companies do not typically have an employee assigned specifically to oversee safety. That means that the supervisor or crew leader is often the competent person, according to Occupational Safety and Health Administration standards.

Workers should always feel free to express their safety concerns to the crew leader on the site at any time. When they do, the leader should stop, listen to the worker, and evaluate the potential safety issue that has been raised. Contractors must identify critical issues, follow OSHA standards and have a written safety plan that all workers follow. Under these conditions, an accident is an unforeseen incident that occurs while following established protocol instead of an incident resulting from an unsafe condition on the site.

In scenarios when excavations are made to 4 or more feet and workers must enter the excavation, OSHA standards apply — including the requirement for a competent person on the site. The competent person must have a higher level of training in order to make decisions regarding the types of hazards present on the site and appropriate safety precautions. OSHA standards state that a competent person is:

- Knowledgeable of applicable standards, by way of training and/or experience
- Capable of identifying commonly foreseeable workplace hazards
- Designated by the employer
- Authorized to take appropriate action in response to any hazard

The competent person is responsible for general safety requirements, but in particular, the competent person is responsible by law for classifying the soil on the site. This classification is different from the United States Department of Agriculture classification. It is critical that the installer understand the distinction between the two classification systems. The USDA classification is essentially based on the size of the particles present in a given soil. The OSHA system is also based on particle size but includes additional criteria regarding soil stability. The OSHA classification determines what sort of protection systems must be used for a given excavation and is based upon the relative risk of cave-in of an excavation. When one considers that most trench fatalities occur in trenches that are 5 to 15 feet deep, it makes sense that soil classification is so crucial. The decisions that the competent person must make affect the safety of all employees working in and around excavations.

If soil classification is required because workers must enter an excavation

deeper than 4 feet, all of the following requirements must be met:

- The soil must be classified by the competent person.
- The classification must be based upon at least one visual and one manual analysis.
- If the site includes layers of soil that fall into different classes, the least stable layer determines the overall classification.
- The soil must be reclassified as needed when conditions change.

The component person will also need to be a leader who creates and enforces the company policies. Effective and clearly communicated safety policies with a matching disciplinary program are crucial to any safety program. If the employees don't know what's expected of them, they can't fault them for making mistakes.

PROTECTIVE MEASURES

The purpose of classifying the soil is to determine what protective measures are required to prevent cave-in and keep workers safe around excavations. Sloping, shoring and shielding are the three standard preventive measures used in excavations less than 20 feet deep. Benching may also be used in conjunction with shoring.

If sloping the sides of an excavation is used to prevent cave-ins, the appropriate amount of sloping required is dependent upon the OSHA soil classification. It is critical that the competent person obtain appropriate OSHA training prior to making such decisions. Trench excavations must be re-inspected by the competent person as needed. They must be re-inspected whenever hazardous conditions exist, prior to the start of work, and after every rainstorm. If soil conditions change across the site, the excavation must be re-inspected as well.

SCHEDULING AN OSHA SITE VISIT

Upon request, OSHA will conduct programs on the importance of and proper

use of adequate safety and health equipment. Employers are strongly encouraged to take advantage of these services. Your competent person should be on site during this visit to maximize this opportunity. These consultations are provided independently of any enforcement activity regarding hazards that may be identified during the visit. However, if an employer fails to take immediate action to eliminate employee exposure to an imminent danger or fails to correct a serious hazard within a reasonable time, enforcement action may be taken.

RANDOM OSHA SITE VISIT

A random OSHA site visit is where your competent person needs to step up and be ready to explain the testing performed and the measures taken to meet the OSHA requirements. This is one of the key activities an employer should keep in mind when selecting the competent person. The competent person must have the appropriate training and fully understand the requirements; but just as critical is having good people skills under pressure. Having good leadership skills will help both get crews to follow the requirements and handle safety related challenges that arise during construction or a site visit. **D**

» ABOUT THE AUTHOR: *Sara Heger, Ph.D., is a researcher and educator in the Onsite Sewage Treatment Program in the Water Resources Center at the University of Minnesota, where she also earned her degrees in agricultural and biosystems engineering and water resource science. She presents at many local and national training events regarding the design, installation and management of septic systems and related research. Heger is the President of the National Onsite Wastewater Recycling Association and she serves on the NSF International Committee on Wastewater Treatment Systems.*

THE PURPOSE OF CLASSIFYING THE SOIL IS TO DETERMINE WHAT PROTECTIVE MEASURES ARE REQUIRED TO PREVENT CAVE-IN AND KEEP WORKERS SAFE AROUND EXCAVATIONS.



PRO TIP

STAY POISED

Take a deep breath, assess the situation objectively, and communicate clearly. Emphasize problem-solving over panic, encourage collaboration, and delegate responsibilities effectively.

SAND/SLUDGE REMOVAL

By Craig Mandli

EQUIPMENT ATTACHMENT



■ PRESSURE LIFT HYDRABORE

The **HydraBore** equipment attachment from **Pressure Lift** fits on the end of any vacuum hose for a simple, more cost-effective approach to hydroexcavation. It breaks up soil, removing it quickly and easily to reduce labor requirements to a one-person operator, keeping every project extra clean and improving safety. This tool reduces the downtime of an operator changing clothes when finished and requires fewer workers by using the tool for its other benefits of pumping deeper and faster. It can also be used in concert with smaller vacuum equipment to gain maximum benefits while capitalizing on project expenses. **866-504-6596; www.pressurelift.com**

EXCAVATORS



■ JOHN DEERE 470 P-TIER EXCAVATOR

John Deere's 470 P-Tier Excavator, which is equipped to support in sand and sludge removal, offers both standard and long-arm options to suit different operational needs. It boasts enhanced adaptability across various applications. Its grade control technology capabilities include factory-installed 2D or 3D Grade Guidance, or SmartGrade options. These grade control features ensure precise excavation, enabling accurate completion of tasks on the first try, which is crucial for high-precision projects and timesaving. It includes a reinforced bucket-to-arm pivot joint and

a sturdy mainframe, ensuring reliability in demanding conditions. Additionally, this excavator provides various track shoe width options, which are essential for improved flotation in soft or marshy terrains, helping to boost stability and mobility. The combination of arm versatility, precision-grade control capabilities and adaptable track shoe options makes it an efficient, multifaceted tool for diverse and challenging excavation tasks and job sites. **800-503-3373; www.johndeere.com**



■ KOMATSU PC130LC-11

Komatsu's upgraded PC130LC-11 includes a longer undercarriage design that increases lifting capacity by up to 20%. This durable, reliable and productive 97.2 hp small conventional tail swing excavator is easily transportable and offers a combination of lightweight power and agility in a small package. It uses up to 12% less fuel than the previous model. Fuel consumption can also be reduced with the auto idle shutdown feature that can be set to automatically stop the engine after a preset

amount of idle time. The diesel oxidation catalyst helps reduce particulate matter by using passive regeneration over 98% of the time. It offers fast cycle times, seamless multifunction motions, exacting bucket movements and exceptional lifting capabilities. High hydraulic pressures help optimize high arm and bucket digging forces. For long-term durability, steel castings in the boom foot, boom nose and arm tip help spread working loads away from high-stress areas. **847-437-5800; www.komatsu.com**

HOSE REEL

■ HANNAY REELS VAC SERIES

The **VAC Series** from **Hannay Reels** is a heavy-duty, single-wrap reel specifically engineered to store large-diameter vacuum and suction hose up to 4 inches. With a narrow footprint, this storage reel can be mounted alongside the tank or between the cab and tank, providing access from either side of the vehicle. Available in either manual or power rewind, this reel provides effortless and fast unwind and rewind operation of the hose while preventing kinks and damage from constant dragging. **877-467-3357; www.hannay.com**



LOADERS

■ MECALAC NORTH AMERICA AX1000

The **AX1000** articulated loader from **Mecalac North America** combines heavy-duty performance with self-stabilizing maneuverability and a sleek design. Its monoboom provides greater boom rigidity and strength, resisting the twisting that can occur with the traditional two-arm setup. Combining large, tinted windows with the unique monoboom design, it eliminates the two loader arms obstructing the operator's view and allows clear visibility to the left and right in addition to straight ahead. Along with enhanced safety, this visibility boosts productivity. It also offers greater stability because the machine's pivot joint is offset at a positive angle. As the machine articulates, the center of gravity is transferred to the rear so it can re-level itself, greatly reducing the risk of the machine toppling over. It has a standard bucket volume of 1.3 cubic yards plus a 75 hp engine. It has a lift capacity of 9,038 pounds and maintains lifting power from the ground to its highest point. **508-921-3076; www.mecalac.com**



■ TAKEUCHI TL6R

The **TL6R** compact track loader from **Takeuchi** has a radial lift loader design that provides greater mid-height reach, bucket breakout and lift arm forces. With a height of 6 feet 5.8 inches and a width of just over 5 feet, it excels on job sites with height and width restrictions. This track loader comes with a newly designed cabin with an overhead 5.7-inch color multi-informational display and backlit rocker switches that control a variety of machine functions. It comes standard with a quiet track design with flotation pads that reduces vibration and noise level while improving ride quality. Its all-steel construction increases the machine's strength and rigidity while protecting vital engine and hydraulic components. Double- and triple-flange track rollers maintain at least two points of contact at all times, making it less susceptible to de-tracking. **706-693-3600; www.takeuchi-us.com**



PUMP

■ PRESVAC SYSTEMS PV750

The **Presvac Systems PV750** rotary vane pump is designed for continuous full-vacuum operation in extreme conditions. It offers 400 cfm at free air, 350 cfm at 15 inches Hg, a maximum vacuum of 27 inches Hg and maximum pressure of 35 psi. Dual fans and twin ballast ports are designed to efficiently cool the pump. The solid housing with deep cooling ribs allows greater heat transfer from the vacuum chamber. Aluminum fans and shrouding work like a heat exchanger. Multiple manifold and drive options are available for truck, trailer or stationary applications. **800-387-7763; www.presvac.com**



SKID STEERS



■ CASE CONSTRUCTION EQUIPMENT SV280B

Featuring 360-degree cab visibility, exceptional bucket breakout force, efficient engine torque and “Hydraulics on Demand” adjustable flow for demanding attachments, the 8,090-pound **SV280B** from **CASE Construction Equipment** offers a rated operating capacity of 2,800 pounds, 232 foot-pounds of engine torque, a bucket breakout force of up to 8,680 pounds, and both standard and optional high-flow auxiliary hydraulics for power and attachment versatility. It has an EZ-EH (electro-hydraulic) setup menu with nine adjustable speed and control sensitivity settings. CASE Ride Control and two-speed ground drive improves material retention and operator comfort. **866-542-2736; www.casece.com**



■ DITCH WITCH SK3000

Contractors looking to gain a 360-degree view of the job site, without compromising power, can turn to the **Ditch Witch SK3000**. The full-size stand-on skid-steer is built with the power to complete a wide range of projects typically reserved for traditional skid-steers, but with the convenience of a stand-on machine. It has an operating capacity of 3,100 pounds, and delivers 5,500 pounds of breakout force to help operators lift and move heavy loads while directing up to 51 hp to the attachment. It provides a smooth, comfortable ride with outstanding maneuverability and stability – even when transporting heavy loads across rough terrain. **580-336-4402; www.ditchwitch.com**

SLUDGE DEWATERING/PRESSES



■ PARK PROCESS GRITCAT

The **GritCat** from **Park Process** is a dewatering container designed to process waste streams containing gritty, sandy solids or any type of nondeformable type of solids. Its filter media is permanently installed over porous support panels in the container and is reusable and cleanable. There are a variety of different types of filter media available, including stainless steel wire mesh, polyester woven material, nylon mesh and polypropylene monofilament. Applications are numerous in the industrial, municipal and oilfield markets because it is simple to operate and maintain, according to the maker. Units are built as roll-off containers, self-dumping hoppers or front loaders. **855-511-7275; www.parkprocess.com**



■ PIK RITE SELF-CONTAINED ROLL-OFF UNIT

Pik Rite self-contained roll-off units are fully operational at the pumping site without a chassis. The heavy-duty front platform holds the user's choice of pump and a Kohler 25 hp electric-start engine. The tank is set up with a level indicator, rear-sight eyes, 36-inch top opening, 20-inch rear opening, 3-inch intake with an internal 3-inch standpipe,

and a 4-inch discharge. The low-profile, 12-inch primary shut-off is paired with a 10-gallon secondary shut-off. Spray-on protective liner protects hoses and promotes durability. Work lights and a safety beacon are mounted on the rear tank head, and a ladder is mounted on the side. Polished aluminum hose trays and custom paint finish are standard. Other customizable options are available. **800-326-9763; www.pikrite.com**

SPILL CONTROL EQUIPMENT/PRODUCTS/SERVICES

■ HYDRA-FLEX AQUA-ROCKET

The **Aqua-Rocket** from **Hydra-Flex** is a disaster relief tool designed to take on nearly any cleaning challenge. This industrial cleaning nozzle uses powerful force to take on dirt, grime, and debris cleaning challenges. It is built with a highly durable tungsten carbide tip and can start or stop in any direction. It's made with a high-temperature, drop-resistant cover that can withstand harsh environments and provides a longer lifespan than ceramic nozzles. It blasts a concentrated, 0-degree water stream with either a 22- or 24-degree cone-shaped, rotating spray pattern. It is available in two pressure ranges — 1,500 to 5,600 and 750 to 3,600 psi — to be compatible with more equipment. It was designed to be repairable to extend the nozzle's life. **952-808-3640; www.hydrflexinc.com**



■ JETTERS NORTHWEST BRUTE PORTABLE CART JETTERS

Brute Portable CART Jetters from **JETTERS NORTHWEST** provide trailer-sized power on four wheels for easy portability. Available at either 9 gpm/4,000 psi (CART-4009) or 12 gpm/3,000 psi (CART-3012), these jetters have the power to clear sand and sludge blockages and can effectively run popular root/grease nozzles. They also can easily be converted to a mountable skid and can easily be connected to a larger water tank. Fuel-injected engines provide “choke-free” electric-starting and work with an optional wireless remote control, which controls jetting on/off and engine on/throttle/off. They have handy panel-mounted controls, 300 feet of jetting hose (400 feet optional) on a 12-volt power-reel (a hand-crank reel is optional), adjustable pulsation control and four jetting nozzles. Propane-fueled engines and more options/upgrades are available. **877-901-1936; www.jettersnorthwest.com**



VACUUM HOSE

■ KURIYAMA OF AMERICA ALFAGOMMA T704HA SERIES THE BOOMER

Corrugated **Alfagomma T704HA Series THE BOOMER** industrial sewer vacuum hose from **Kuriyama of America** is made with a 1/4-inch-thick red gum rubber tube designed for wet or dry applications where severe abrasion is a factor. The corrugated black conductive styrene-butadiene/natural rubber blend cover provides abrasion resistance. The hose can be grounded. All sizes are rated to full vacuum and a pounds-per-square-inch safety factor of 3-to-1 for most sizes. The hose remains flexible in temperatures from -40 to 212 degrees F. It is available with soft-cuffed ends for easy installation and clamping. **847-755-0360; www.kuriyama.com**



VACUUM TRUCKS/TRAILERS

■ GAPVAX HV-57

The **GapVax HV-57** air mover is designed for cleaning up spills and processing waste. It uses a combination of vacuum and air flow to convey material. It is designed for wet or dry filtration; moving debris through specially designed cyclones and baghouse areas eliminating carryover that can damage components. A top-loading inlet configuration allows users to get the most out of every inch. It was built with a low center of gravity to keep stability in mind as you fill up the tank and keep the work site clean. The full-opening tailgate has extra-large dump chutes that open in tandem to release excess debris. Since they're located under the truck's cyclones and baghouse, they can release as much dirt debris as possible. The tailgate configuration gives easy access to adjust and clean out the debris tank any time you need, and a full-bearing body lift hinge gives you complete control over your truck. **888-442-7829; www.gapvax.com**





■ GUZZLER LIQUID RING (LR)

The **Guzzler Liquid Ring (LR)** is a powerful and efficient industrial vacuum truck that is designed to handle both solids and liquids. With its high vacuum power and four-stage filtration system, it stands out when it comes to uptime and productivity. Its quiet and virtually maintenance-free Liquid Ring Pump operates at a noise level of 10-12 dBA, making it quieter than typical industrial vacuum loaders and ideal for use in noise-sensitive environments. It is

equipped with advanced safety features such as a tailgate safety pin, backup alarm and alarms for low and high-water levels, ensuring safe operation at all times. It is not only easy to operate but also easy to maintain. Its intuitive and simple controls make it user-friendly, while its original single-mode system simplifies operation for maximum productivity on tough jobs. **815-672-3171; www.guzzler.com**



■ IMPERIAL INDUSTRIES' FREIGHTLINER 108SD

Imperial Industries' Freightliner 108SD includes a fully remote-controlled vacuum system. It comes with a 4,200-gallon painted aluminum tank with a National Vacuum Equipment Challenger 4310 blower (940 cfm). Functionality includes full control of the tank's PTO and pneumatic valves, providing the ability to switch between vacuum, neutral and pressure modes without leaving a septic tank access point. The bottom third of the tank is dou-

ble-plated, and the tank is painted black with a diamond plate chip guard, full-flanged and dished heads for baffles, a hot shift PTO, one 4-inch vacuum inlet with lever valve, one 6-inch discharge with piston valve with a handle, three 5-inch sight glasses on the rear tank head, full-length aluminum hose trays, a SeeLevel indicator, a 24-by-24-by-24-inch aluminum toolbox, U.S. Department of Transportation LED light package, two rear LED work lights and an adjustable stainless steel rear bumper. **800-558-2945; www.imperialind.com**



■ SUPER PRODUCTS MUD DOG 700

Mud Dog 700 vacuum excavators from **Super Products** are designed to meet the challenges of compact, urban projects as well as large-scale excavation projects. The unit features a 7-yard debris body and 600-gallon water tank. This model comes standard as a dump body with an electric vibrator offering a 50-degree dump angle with the capability of dumping into a 48-inch container. Additionally, it is equipped with a rear-mounted, extendable, 8-inch-diameter boom that reaches 18 feet, has 270-degree rotation and pivots 10 degrees downward to minimize job site restoration and eliminate traffic congestion near roads. **800-837-9711; www.superproducts.com**



■ TRANSWAY SYSTEMS TERRA-VEX HV65

The Transway Systems Terra-Vex HV65 is a single-operator unit capable of performing all functions from a single remote control. The blower, water tank, boiler, jetter system and wands are housed in an insulated, sound-dampening enclosure with thermostat-controlled heater. It includes large, winter-friendly roll-up doors with ample storage. An onboard air compressor is available. **800-263-4508; www.transwaysystems.com**

■ VAC-CON MUDSLINGER MS800

The **Mudslinger MS800** trailer-mounted hydrovac from **Vac-Con** is designed to provide the same power, suction and capacity of a truck hydroexcavator on a portable trailer. It includes the choice of Tier 4 diesel or gas engine options providing up to 1,190 cfm and 16 inches Hg with a PD blower and 325 gallons of water. It has an 845-gallon debris tank and a 9-foot boom with 24 inches of hydraulic extension providing a full range of motion. It is designed to be a standalone unit but can also provide support

to construction, horizontal directional drilling and public utility fleets. A variety of applications include daylighting, potholing, culvert and manhole cleaning, and utility locating. **904-284-4200; www.vac-con.com**



CASE STUDY



■ VAC AND JET/VAC UNITS EFFECTIVE CLEANING AFTER STORM SURGE

PROBLEM: Long Beach Island, New Jersey, experienced some of that state's greatest damage and most extensive cleanup headaches resulting from Hurricane Sandy's storm surge. The 9-foot storm surge filled storm drains and sanitary sewer lines with sand and mud, and the first floors of many beach homes were designed to break away in a storm surge and left behind four or more feet of sand and debris.

SOLUTION: Haas Environmental used AllJetVac models from **Vacall** to remove sand and mud that the storm surge forced into storm drains and one sanitary sewer, filling them completely up and over the drain covers. Vacall's pressure washer feature was used around the top of the basin to gain access to clean out the sand and mud. In addition, after the

waters receded, homes were awash in several feet of sand. Haas crews used AllVac high-performance industrial vacuum machines to clear sand and debris from homes, after first removing drywall to gain access to rooms and to extract sand that had been caked within the walls.

RESULT: Using a combination of high-pressure jetting action and superior vacuum forces, crews were able to efficiently clear debris from three drains at each intersection, completing work on three to four streets a day. In the homes, most of the material removed was sand, but the vacuum forces of the AllVac allowed the removal of about any type of debris encountered, including concrete from the parking lots, rocks, wood and other material. **800-382-8302; www.vacall.com**

COMMAND CENTER

“MULTI-PURPOSE WORKSTATION”



OPERATIONS CENTER



PRIVATE BATHROOM & SHOWER



SLEEPING QUARTERS



KITCHENETTE AREA



COMMAND CENTER

The Satellite Suites Command Center is an all-in-one solution for businesses that require a flexible and mobile workspace. It offers a safe and comfortable place for your crew to work, sleep, eat, and relax, regardless of where your site is located. This practical solution is ideal for companies seeking efficiency and security, especially for natural disaster clean-up efforts and construction sites.

The 30' Multi-Purpose Command Center is designed to be the base of operations featuring a roomy 13' slide-out that contains five workstations with charging and connectivity, sleeping for up to five, a lounge area with a refrigerator, microwave, couch, and a 50" TV/monitor. Located at the front of the trailer full bathroom with a large shower for complete privacy.



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