

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

www.cleaner.com

JANUARY 2014



Indianapolis
FEBRUARY 24-27 2014

PAGES 36, 58 & 80

Change of DIRECTION

HUSBAND AND WIFE TEAM MAKE SUCCESSFUL SHIFT FROM INFRASTRUCTURE CONSTRUCTION TO SPECIALIZED CLEANING SERVICES **PAGE 18**

TOUGH JOB

Directional drilling ensures water supply

MONEY MACHINES

Fluid-cleaning system eliminates need for freshwater supply

MONEY MANAGER

Choose the right financing option for your next big purchase



Locating From A Different Direction: **EASY.**

General's NEW Gen-Eye Hot Spot™ Pipe Locator

Right out of the box, Hot Spot™ makes locating easier and simpler. Its total field antenna array and intuitive style of operation quickly leads you to exactly what you're looking for, whether you're a first-time user or a seasoned pro. Locate cameras, sondes, active power lines and utilities with confidence. It gets you where you need to be—on the Hot Spot.

For more information or a demonstration, contact the Drain Brains® at 800.245.6200 or visit www.drainbrain.com/hotspot.



VISIT US AT THE
PUMPER & CLEANER EXPO
BOOTH 6412



For more information or a demonstration: www.drainbrain.com/hotspot

General
PIPE CLEANERS

The toughest tools down the line.™



©2013 General Wire Spring



Who's in Charge of Evolution?

The Vac-Con Combination Machine has evolved from many years of experience ... the customer's experience! If you want to know what works ... or not, ask the guy who spends his days at the end of a vacuum hose trying to do a good job.

Contact us Today!
888.491.5762 or
go to **www.vac-con.com**

We will listen because you make
the evolution for better machines.

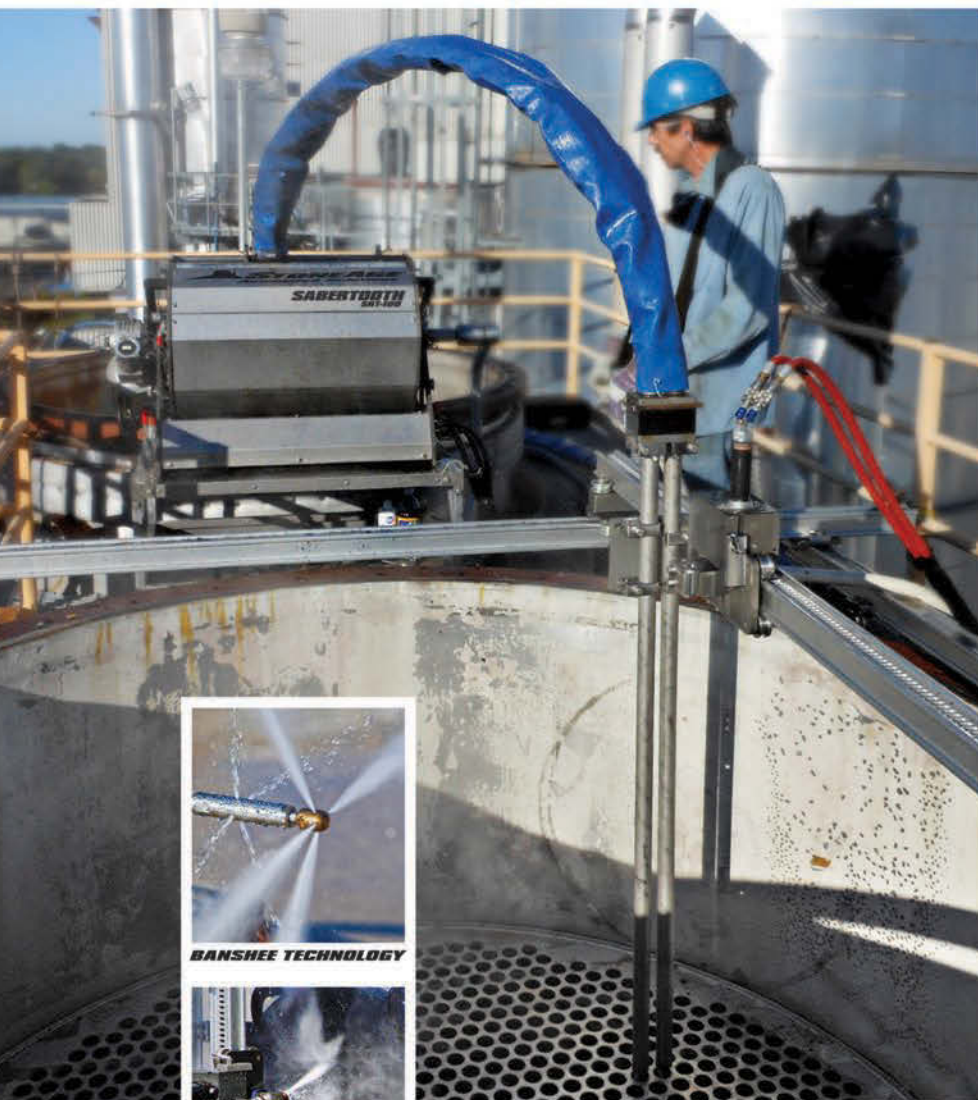


Scan the QR code
to view a
combination
machine product
demonstration.

A HOLDEN INDUSTRIES Company



A NEW STANDARD IN AUTOMATED TUBE CLEANING



BANSHEE TECHNOLOGY



SHOTGUN COMPATIBLE



REMOTE CONTROLLED

SABERTOOTH SRT-100 SPECIFICATIONS

MAXIMUM PRESSURE	22k psi (1500 bar)
MAXIMUM FLOW	40 gpm (150 l/min)
TUBE I.D.	0.87–2.0 in (22–50 mm)
TUBE PITCH.....	1.32–2.32 in (33–59 mm)
NOZZLES	BANSHEE BN18 & BN24
HOSE	8mm, 66 ft length, 52 ft usable stroke

The **SABERTOOTH SRT-100** provides a powerful alternative to manual lancing of large diameter tube bundles such as those found in industrial condensers and evaporators. This portable system automates tube lancing, increasing safety and efficiency, and delivers consistent cleaning results through the full length of each tube.

- Hoses are contained and automatically managed in an integrated reel
- Operation can be manned remotely from a safe distance
- Two lances working at once increase productivity
- Fits through man ways as small as 24 inches (excluding cart)
- Shotgun compatible for cleaning the bundle face

"It's very productive for us. We wouldn't be working here if we didn't have automated equipment. Customers have seen the value, and they're really happy with it."

*-Richard Bombard
Account Manager
PSC Industrial Services*



For more information about automated tube cleaning, contact StoneAge Solutions at 1-866-795-1586 or visit our website: www.stoneagetools.com/sabertooth

SEE YOU AT THE PUMPER!

Visit StoneAge in Booth #5130
February 24–27, 2014



underground
understood

|| I'm always looking for ways to make cleaning more productive. With JetScan, there's no trial and error—my guys know in minutes what they are up against, without the cost of CCTV. **||**



Scott Nocero, Assistant Superintendent
Franklin Township (NJ) Sewerage Authority

 **jetscan**

Never jet blind.

The JetScan video nozzle is the quick, easy way to see what you're jetting. It helps you size up each job, pick the right tools, verify success, and determine if a pipe needs further attention. JetScan is affordable enough to put on every truck, yet captures valuable HD footage that can be viewed moments later on a laptop or tablet.



connect

Connect JetScan to any jetter hose and press the record button.



record

Launch JetScan and capture footage as it advances through pipe.



review

Afterward, eject the SD card to view footage on a laptop or tablet.

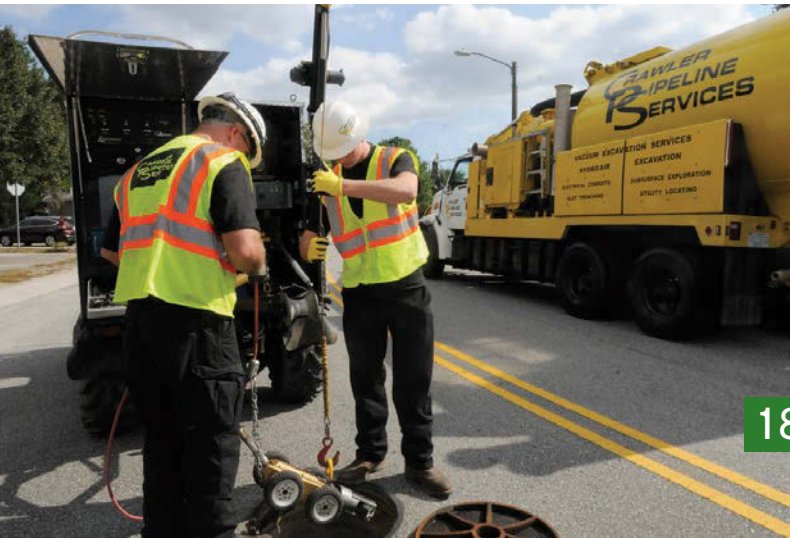


see it in action at <http://bit.ly/V5ykc9>



Envirosight

www.envirosight.com • 973.252.6700



18



28



50

features

- 18 Profile: Change of Direction**
Husband and wife team make successful shift from infrastructure construction to specialized cleaning services.
By Marian Bond
- 36 Expo Preview: See the Stars in Indy**
NFL Combine gives football fans extra incentive to attend the Pumper & Cleaner Expo.
By Cory Dellenbach
- 50 Profile: The Big Fix**
Entrepreneurial spirit and equipment knowledge guide a startup contractor as he jumps into muddy fray.
By Marian Bond
- 58 Expo Preview: Let's Make It Great**
Taking it all in at the Pumper & Cleaner Expo can be overwhelming. Here is some advice to ensure you make the most of your trip to the industry's best trade show.
By Briana Jones
- 80 Accredited Education & Training - 2014 Pumper & Cleaner Expo**

departments

- 12 From the Editor: The Right Way**
Startup companies show success doesn't have to take decades if you follow the right approach.
By Luke Laggis
- 14 @cleaner.com**
Be sure to check out our exclusive online content
- 28 Tough Job: Rock of Ages**
Horizontal directional drilling ensures northeastern Wisconsin customers receive an uninterrupted water supply.
By Scottie Dayton
- 40 Tech Perspective: A Protected View**
Operators need to take proper precautions to prevent unnecessary damage to CCTV equipment.
By Jim Aanderud
- 44 Money Machines: Working Without Water**
Fluid-cleaning system allows contractor to clean large sewer lines without a freshwater source.
By Ken Wysocky
- 48 Safety First: Progressive Effects**
Don't let seemingly minor situations and factors stack up and lead to serious accidents.
By Doug Day
- 62 Better Business: Focus on Your Strengths**
Learn to find and leverage what's right in your workplace with Appreciative Inquiry.
By Chris Walling
- 66 Product Focus:**
Location and Leak Detection, Drainline TV Inspection
By Craig Mandli
- 78 Money Manager: Getting That Loan**
Pay attention to these guidelines when it's time to borrow money for your next truck.
By Erik Gunn
- 96 Product News**
Spotlight: Vacuum unit works in tight spaces
By Ed Wodalski
- 98 Industry News**

COMING IN FEBRUARY

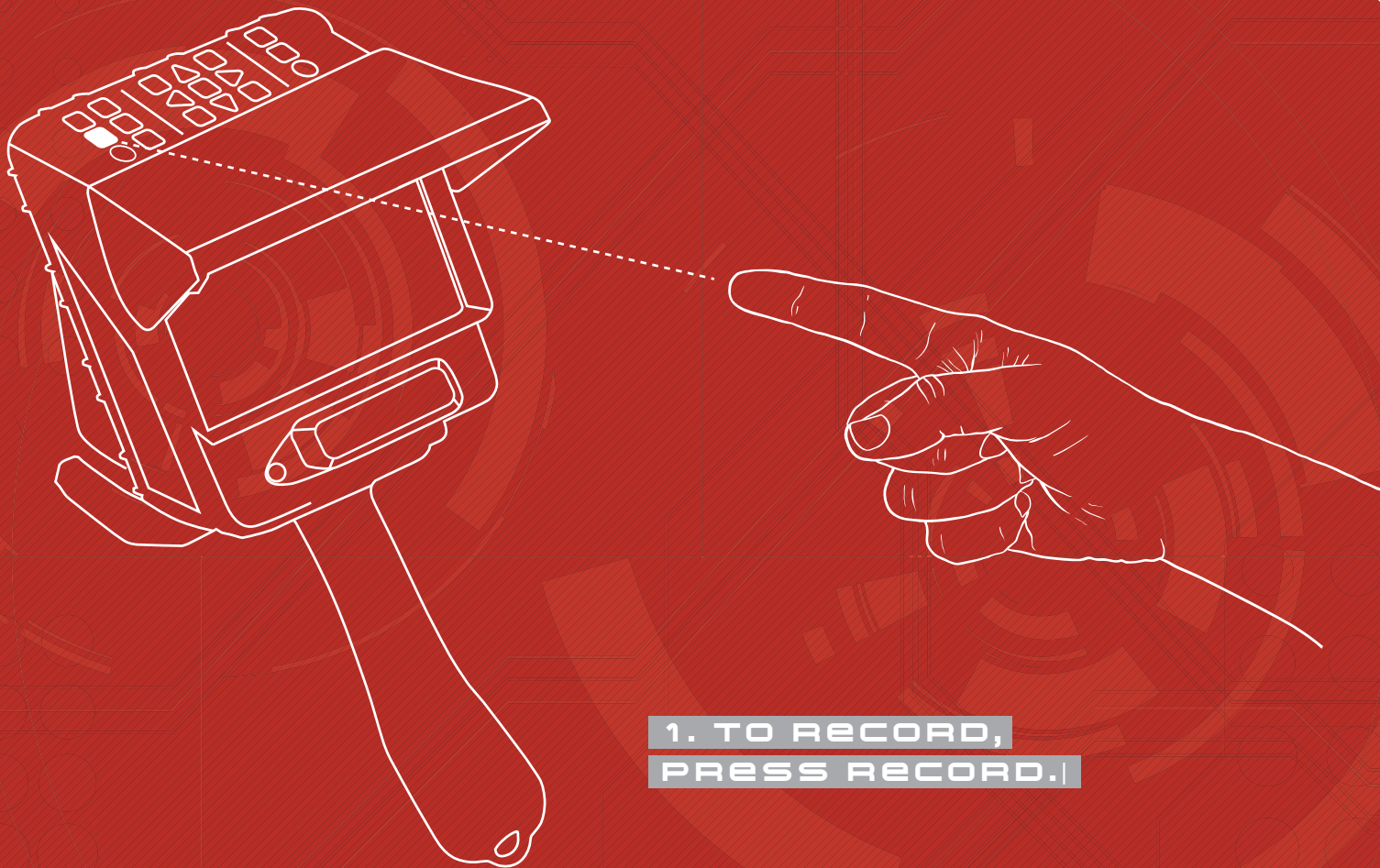
ISSUE FOCUS: Field & Office Technology

- **MONEY MACHINES:** Lateral-launch camera boosts productivity
- **MONEY MANAGER:** Equipment's impact on your business value
- **SAFETY FIRST:** Don't take near misses lightly
- **EXPO PREVIEW:** The best classes for cleaners

Cleaner ON THE COVER:

Crawler Pipeline Services Owner Becky Thompson with her husband and co-owner, Wayne Thompson, (left) and son Cody. After two decades in the construction business, the Thompsons shifted gears and moved into pipeline inspection and cleaning. The addition of hydroexcavation services has helped them carve out a valuable new market. (Photography by Alan Cradick)

RECORDING INSTRUCTIONS



1. TO RECORD,
PRESS RECORD.!

The Emerson logo is a trademark and service mark of Emerson Electric Co. ©2013, RIDGID, Inc.

WHEN WE SAY OUR MONITORS ARE EASY TO USE, WE MEAN REALLY EASY.

One touch is all it takes to record digital video with RIDGID's growing family of CS digital recording monitors. Each monitor is designed for daylight visibility and easy image and video recording. Built-in USB ports provide easy transfer and storage of files, and the entire family integrates with SeeSnake® HQ™ and RIDGIDConnect.com, making sharing as easy as recording.

















★ REQUEST A FREE ONSITE DEMO ★

RIDGID.COM/CS | 1.800.769.7743

We
Build
Reputations™


RIDGID

EMERSON
Commercial & Residential Solutions

A	
Allan J. Coleman Co.	15, 55
 Amazing Machinery, Inc.	43
 Aqua Mole Technologies, Inc.	97
 Aries Industries, Inc.	65
B	
 Bandlock Corp.	97
 Bowman Tool Co. & Systems	72
C	
Cable Center, The.	39, 99
 Cam Spray	36
 Central Oklahoma Winnelson	60
 Chempure Products Corp.	71
CIPP Services, LLC	79
Cloverleaf Tool Co.	42
 Coast Manufacturing	42
 CUES.	25
D	
 Drainables Direct.	34
 Duracable Manufacturing Co.	29
E	
 Electric Eel Mfg.	21
 Envirosight, LLC.	5

 Enz USA, Inc.	16
------------------------------------------------------------------------------------------------------	----

F	
 F. S. Solutions.	31, 64
Forbest Products Co.	26

G	
 GapVax, Inc.	107

 Gardner Denver Waterjetting Systems	35
----------------------------------------------------------------------------------------------------------------------------	----

 General Pipe Cleaners/General Wire Spring ...	2
---------------------------------------------------------------------------------------------------------------------------------	---

 Gorlitz Sewer & Drain, Inc.	61
--------------------------------------------------------------------------------------------------------------------	----

 Guzzler Manufacturing, Inc.	13
--------------------------------------------------------------------------------------------------------------------	----

H	
HammerHead Trenchless Equipment	27

 Hannay Reels	64
Hurco Technologies, Inc.	59

J	
 Jetstream of Houston.	17, 47


K	
 Ken-Way Corporation	60

L	
 Lansas Products	32-33
LaPlace Equipment Co.	72

M	
 Mid-Atlantic Waste Systems.	38


 Milwaukee Rubber Products	54
--------------------------------------------------------------------------------------------------------------------	----

 MyTana Mfg. Company, Inc.	37
--------------------------------------------------------------------------------------------------------------------	----

N	
 NLB Corp.	26

 NozzTeq, Inc.	64
-------------------------------------------------------------------------------------------------------	----

O	
 Oceanquip, LLC.	38

 Olvidium, Inc.	12
-------------------------------------------------------------------------------------------------------	----

P	
Pearpoint/SPX.	63


 Perma-Liner Industries, LLC.	9
----------------------------------------------------------------------------------------------------------------------	---

 PHCC-GLAA.	11
---------------------------------------------------------------------------------------------------	----

 Picote Solutions.	16
Pipeline Renewal Technologies.	45

 PipeLogix, Inc.	38
----------------------------------------------------------------------------------------------------------	----

 PrimeLine Products, Inc.	63
-------------------------------------------------------------------------------------------------------------------	----

 Pulsar 2000, Inc.	71
------------------------------------------------------------------------------------------------------------	----

R	
 RapidView IBAK North America.	49

 Ratech Electronics, Ltd.	56
-------------------------------------------------------------------------------------------------------------------	----


 RIDGID.	7
--------------------------------------------------------------------------------------------------	---


 RS Technical Services, Inc.	41
RYCOM Instruments, Inc.	72

S	
 Safety Corporation of America.	42

 Scooter Video.	73
---------------------------------------------------------------------------------------------------------	----

 Southland Tool Mfg., Inc.	23
--------------------------------------------------------------------------------------------------------------------	----


 Spartan Tool, LLC.	108
-------------------------------------------------------------------------------------------------------------	-----

 StoneAge, Inc.	4, 34
---------------------------------------------------------------------------------------------------------	-------

 Super Products, LLC.	10
---------------------------------------------------------------------------------------------------------------	----


T	
 T&T Tools, Inc.	46
The Soil Surgeon, Inc.	38

 TRY TEK Machine Works, Inc.	12
TST Sweden AB.	57

V	
 Vac-Con, Inc.	3

 Vivax-Metrotech Corp.	46
VSI Rentals.	56

W	
 Water Cannon, Inc.	106
Westmoor Ltd.	57
Woma Corporation.	60

X	
 Xcam.	79

Marketplace.	100
Classifieds.	102



Scan the code with your smartphone

PERMA-LATERAL™ SCRIM LINER

PATENT # 8590575

SCRIM-ENFORCED PIPE LINER

Stretch-resistant lining material for use with the #1 selling small diameter pipe lining system.

- ▶ A FLAT, FLEXIBLE STRENGTH LAYER OF CROSS-HATCHED FIBERS
- ▶ A FLAT, FLEXIBLE SUPPORT LAYER OF A FELT BASE MADE FROM NON-WOVEN FABRICS
- ▶ LAYERS ARE SANDWICHED BETWEEN A SEALING LAYER AND A BARRIER LAYER



3MM, PVC COATING WITH PATENTED POLYESTER SCRIM REINFORCEMENT. NON-WOVEN, NEEDLE PUNCHED FELT, STITCHED AND TAPED SEAMED.

NEW PRODUCTS FOR THE PERMA-LATERAL™ SYSTEM!



CLEAR CALIBRATION TUBE

Provides visual certification of liner placement and verification of cure



CAMERA INSPECTION PORT

Allows a lateral push camera to be inserted inside the clear calibration tube, providing a visual certification of the liner placement prior to curing.

PATENTED



DIRECTIONAL SHOES

Allows the installer to direct the liner and calibration tube upstream or downstream.

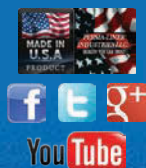
PATENTED

See us at



With Indoor and Outdoor Live Demonstrations.

Plus, on-hand, knowledgeable staff to answer your questions.



PERMA-LINER™ INDUSTRIES, LLC.

ZERO DIG TRENCHLESS PIPE REPAIR

1-866-336-2568 Toll Free • 1-727-507-9749 Int'l • www.perma-liner.com

Covered by US Patent Nos. 7,343,937; 7,448,413; 7,588,055; and 7,753,081



Unique Capabilities



MUD DOG 1200

12 YARD HYDRO EXCAVATOR



45° Upward and 25° Downward Pivot



Tilt – Ejection Unloading

Super Products designs, engineers and constructs its hydro excavators to be the best in the industry. And the Mud Dog® 1200 is no exception.

- 12 yard capacity collector body
- 1000 gallon water tank system
- Rear-mounted boom offers exceptional reach, rotation and upward/downward pivot capability
- Ejector plate debris removal technology
- Collector body tilt feature
- Many equipment options available including Super Products' latest innovation, the Acculevel™ load sensor system



800.837.9711 • www.muddogeasy.com

Visit us online to view our newest Mud Dog videos!

Cleaner

FOR DRAIN AND PIPE CLEANING, INSPECTION AND REHABILITATION PROFESSIONALS

Published monthly by COLE Publishing, Inc.
1720 Maple Lake Dam Rd., PO Box 220, Three Lakes, WI 54562

Call toll-free 800-257-7222 | Outside of U.S. or Canada call 715-546-3346
Mon- Fri., 7:30 a.m.-5 p.m. CST

Website: www.cleaner.com | Email: info@cleaner.com | Fax: 715-546-3786

SUBSCRIPTION INFORMATION: A one year (12 issue) subscription to *Cleaner* in the United States or Canada is free to qualified subscribers. A qualified subscriber is any individual or company in the United States or Canada that is involved in the inspection, cleaning, repair and installation of residential and commercial sewer lines. Non-qualified subscriptions are available at a cost of \$60 per year in the United States and Canada/Mexico. Subscriptions to all other foreign countries cost \$80 per year. To qualify, visit www.cleaner.com/order/subscription or call 800-257-7222.

Our subscriber list is occasionally made available to carefully selected companies whose products or services may be of interest to you. Your privacy is important to us. If you prefer not to be a part of these lists, please contact Nicole at nicole@colepublishing.com.

CLASSIFIED ADVERTISING: RATE: No Photo Classified \$25 for 20 words, each additional word \$1. All classified advertising must be PAID IN ADVANCE. DEADLINE: Classifieds must be received by the first of the month for insertion in the next month's edition. PHONE-IN ADS ARE NOT ACCEPTED. Ads may be faxed only when charging to MasterCard, VISA, Amex or Discover. Please supply all credit card information with faxed ads. Be sure to include your phone number (with area code) in your ad. Make checks payable to COLE Publishing Inc. and mail with classified ad to the address above. CLASSIFIED ADVERTISING APPEARS NATIONWIDE AND ON THE INTERNET. Not responsible for errors beyond first insertion.

DISPLAY ADVERTISING: Contact one of our sales staff at 800-994-7990. Publisher reserves the right to reject advertising which in its opinion is misleading, unfair or incompatible with the character of the publication.



Kayla Bisnette Jim Koshuta

REPRINTS AND BACK ISSUES: Visit www.cleaner.com for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or email jeffl@colepublishing.com. To order back issues, call Nicole at 800-257-7222 (715-546-3346) or email nicole@colepublishing.com.

CIRCULATION: Circulation averages 27,756 copies per month. This figure includes both U.S. and international distribution.

© 2014 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



2014 FLOW EXPO

LONG BEACH CONVENTION CTR
LONG BEACH, CALIFORNIA

FEBRUARY 22, 2014 - SATURDAY 9AM - 4PM

What can we say about the Flow Expo?



Mobile Attendee
Registration

Enough said!

FLOWEXPOUSA.COM
FLOWEXPOUSA.COM

GET SOCIAL WITH Cleaner

- www.facebook.com/CleanerMag
- www.twitter.com/CleanerMagazine
- www.plus.google.com
- www.youtube.com/CleanerMagazine

PUMPER & CLEANER ENVIRONMENTAL EXPO INTERNATIONAL
EDUCATION DAY: Feb. 24, 2014
EXHIBITS OPEN: Feb. 25 - 27, 2014
Indiana Convention Center
WWW.PUMPERSHOW.COM

Meeting a CHALLENGE?

Do you have a Tough Job story to tell?

Drop us a line at editor@cleaner.com and tell us about how you met a serious jobsite challenge to delight a customer.

Cleaner



Luke Laggis
editor@cleaner.com

The Right Way

Startup companies show success doesn't have to take decades if you follow the right approach

By Luke Laggis

We usually feature contractors who have been in business for decades and have established reputations that travel well beyond the reach of their marketing efforts. This month's issue of *Cleaner* is a bit different.

Marian Bond penned both profiles in this issue, and each features a contractor who entered the cleaning industry within the past few years. Both brought experience from the construction trades, but neither worked for a cleaning company. Still, they applied their experience and quickly found a path toward success.

Kris Norris formed NCM Hydro Vac Services after spending three years with his brother's construction firm. Norris has a long family history of entrepreneurship, and he wanted to find his own successful niche.

Norris was committed to success, and he went about it the right way. I've said it before and it's worth repeating: This industry provides an opportunity for success to anyone who is willing to work hard and do business the right way.

With the help of financial backers, he purchased a 2006 Vactor combination unit that was set up for year-round sewer work and hydroexcavation in his home ground of Ottawa, Ontario. He maintained the family connection by hiring his father, Dana Norris, as his first employee, and the duo began the daunting task of promoting the newly formed company. He faced established competitors with larger fleets, and prospective customers were often skeptical and told him to come back when he had a second or third unit.

Norris was quickly able to establish NCM as a specialized remote hole excavation company, and worked hard to grow the company. He was fortunate to secure work within the fiber-optics community, as well as municipal work cleaning catch basins and culverts and flushing storm and sewer lines. The company also formed relationships with larger contractors and began cleaning culverts – anywhere from 40 to 500 feet long – in preparation for relining jobs.

Norris was committed to success, and he went about it the right way. I've said it before and it's worth repeating: This industry provides an opportunity for success to anyone who is willing to work hard and do business the right way. Norris is a good example, and so are Wayne and Becky Thompson, owners of Crawler Pipeline Services in North Carolina.

The Thompsons were operating an infrastructure contracting firm when they decided to change gears and start a new company focused on cleaning and inspection. They bought a couple camera systems, then added a jet/vac truck and began a promotional program through their website touting the hydroexcavation process, which Wayne saw as a wide-open opportunity for expansion. The business has steadily progressed from there.

Crawler Pipeline is now serving several municipalities along with residential customers, and has carved out a valuable niche in the gas and oil industry. The business has come a long way just shy of its second anniversary, and while the Thompsons' knowledge and experience have played a big part in their success, it really boils down to being honest, on time and doing quality work.

That's how you do business the right way. It's an approach we celebrate in *Cleaner*, and it's one you should emphasize in your business.

I hope the stories of these companies' success can help you find your own. Enjoy this month's issue. **c**



6" to 15" Tap Cutter

FAST DELIVERY
on
replacement parts

Hundreds in use!



www.trytek.com

Contact us for more information:
Phone: 717-428-1477
 Fax: 717-428-2865
 Email: trytek@trytek.com
 250 N. Main St.
 Jacobus, PA 17407 USA

Serving the industry for over 25 years

We accept most major credit cards

BOOTH 1222



Kills roots fast Keeps roots out

www.olvidium.com
(866) 676-7956

Who knew your best
business partner would be
a truck?



It takes more than just steel

to create the toughest industrial vacuum truck in the business, it takes the same grit you're made of to give it all, day after decade. So every Guzzler® is built with the reliability you need in a business partner. Not the kind that wears a suit, but the kind that thrives on getting dirty and getting things done. This machine is built for the long haul, easy to operate and even easier to clean and maintain. So you'll never have to doubt that your investment gave so much more in return.

Because around here, we don't just build trucks. We build tough.



Guzzler.com • 800.627.3171

@Cleaner.com

Visit the site daily for new, exclusive content. Read our blogs, find resources and get the most out of *Cleaner* magazine.



LIFESAVER

When You're First at the Scene

Commercial drivers turned first-responders? It's possible. Find out how Driver First Assist, a revolutionary program in the UK, trains commercial drivers to respond to traffic accidents through first-aid know-how and accident scene management. The program, which is the brainchild of a former truck driver, could include 30,000 drivers in its first five years. >> www.cleaner.com/featured



HOLY TRUCKS!

SEMA Pickup Roundup

Have you died and gone to truck heaven? Unfortunately, no.

It's just a roundup of some of the most drool-worthy vehicles — including a Team Realtree showpiece and a refrigerator-equipped Ford F-350 Super Duty — from the annual Specialty Equipment Market Association conference in Las Vegas. So sit back, dream a little and enjoy some truck eye-candy. (Just don't let your service techs get any ideas!) >> www.cleaner.com/featured

OVERHEARD ONLINE

“We work on turn-of-the-century systems and they're not getting any younger, so failures become more and more prevalent.”

- *Cleaner Rewind:*
Unlikely Growth in Down Economy
>> www.cleaner.com/featured



DO YOU QUALIFY?

Engine Rebates

The EPA is offering financial assistance to replace older engines and exhaust controls in construction equipment. Find out if you qualify, and learn how to apply for rebates of up to \$69,000 under the Diesel Emission Reduction Act. >> www.cleaner.com/featured

Emails and Alerts



Visit Cleaner.com and sign up for newsletters and alerts. Get exclusive content delivered right to your inbox and you'll stay in the loop on topics important to you!

Join the Discussion



Find us on Facebook at www.facebook.com/CleanerMag
or
Twitter at www.twitter.com/CleanerMagazine

Allan J. Coleman – Since 1905

Call us today! 773-728-2400

5725 North Ravenswood Avenue • Chicago, IL 60660 • info@allanjancoleman.com



OLDEST NAME IN THE BUSINESS — Over 100 YEARS OLD

SeeSnake® MAX rM200 Camera System

- Next Generation Push Cable and Improved Reel Mechanics
- Ultra Compact Camera Head
- Transport Enhancements
- Docking System
- Self-Leveling Camera Head



SeeSnake® CS6 Digital Recording Monitor

- Direct-to-USB recording for fast, efficient documentation of inspection jobs
- Water-resistant keypad for direct control of essential camera and monitor functions
- Daylight viewable display for a crisp, clear in-pipe image
- SeeSnake HQ Software to edit, archive, and deliver reports via print, DVD, or online
- On-screen keyboard for basic titling and text entry
- CS-6 will dock in the RM-200 Max or operate as a stand alone monitor



CS10 Digital Recording Monitor

- USB Thumb Drive Recording
- 12.1" Daylight Readable Display
- Multi-Mode Recording
- Software Integrations



RIDGID®

Convert
your old RIDGID
VCR monitor
to a USB
recorder!



Contact
us on
how we
can do it?

**Authorized SeeSnake
Repair Center**

**THE BEST SERVICE AND
FAST TURN AROUND!**

SeekTech® SR-20

SeekTech uses omni-directional antennas, guidance arrows and an easy to read mapping display.

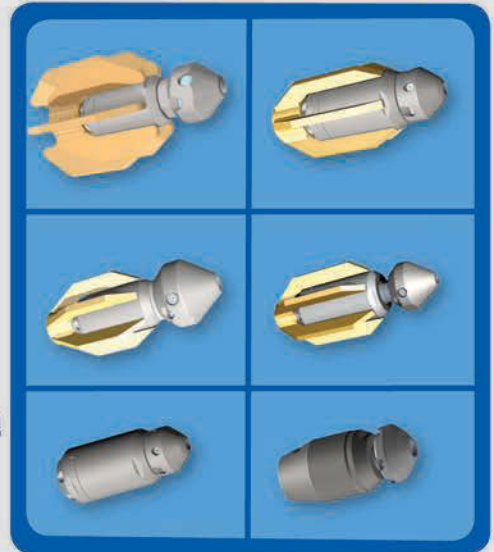


NaviTrack® Scout®

Scout is designed to solve demanding remote transmitter (sonde) locates using multi-directional locating technology.

We Have RIDGID Parts!

If you buy the best, you are only sorry once!



Application range: 2.5 - 24

The Bulldog® Recycling Rotating Nozzles are on the prowl to provide the most efficient and economic pipe cleaning. With an all-purpose nozzle and broad application base, the Bulldog® is basically four tools in one—great for clearing roots, debris and blockages!

Enjoy the following Bulldog® advantages.

- Operates with both fresh and recycled water
- Oil-free braking system results in low wear and tear operation
- Easy to handle
- Extremely low maintenance
- Transport and water costs are noticeably reduced



enz® usa inc.

1585 Beverly Ct., Unit 115 | Aurora, IL 60502

CALL 877-ENZUSA1 FOR
(369-8721)
A DEALER NEAR YOU
www.enzusainc.com



Branch out with lateral cutting

Succeed with **smart** solutions for trenchless small diameter drain rehabilitation



Locate your reseller at picotesolutions.com or call 219 440 1404 for further information.

THE SMART CUTTER™



PRODUCT OF THE YEAR 2012

**SAME-DAY SHIPPING.
PROBLEM SOLVING.
MAKING IT
HAPPEN.**

**We're here with whatever you need
when the pressure's on.**



Jetstream[®]
There's A Way. 

The waterblasting source for parts, service & expertise. To learn more, visit waterblast.com.

Change of DIRECTION

BY MARIAN BOND

PHOTOGRAPHY BY ALAN CRADICK

HUSBAND AND WIFE TEAM MAKE SUCCESSFUL SHIFT FROM INFRASTRUCTURE CONSTRUCTION TO SPECIALIZED CLEANING SERVICES

Wayne Thompson Jr. and his wife, Becky, were running an infrastructure contracting business with nine utility crews and a substantial fleet of heavy equipment when they started Crawler Pipeline Services. Their combined years of business and construction experience gave the enterprise a strong backbone.

“Our business plan initially was to concentrate on pipeline inspections, drainline inspection and cleaning,” says Wayne Thompson. “We had shut down the construction company we operated for 20 years, partially due to the economy, but also because we were looking for an opportunity to work in a section of the industry where we would not be required to have a large number of employees, and would have a more manageable situation.”

Thompson grew up in construction and is licensed for highway construction in North Carolina. Becky holds a PU license for water and sewer lines, and has corporate experience in human resources and as a chief financial officer. As majority owner in Crawler, she is also in charge of finances and scheduling. Wayne uses his expertise to deal with equipment and on-site projects.

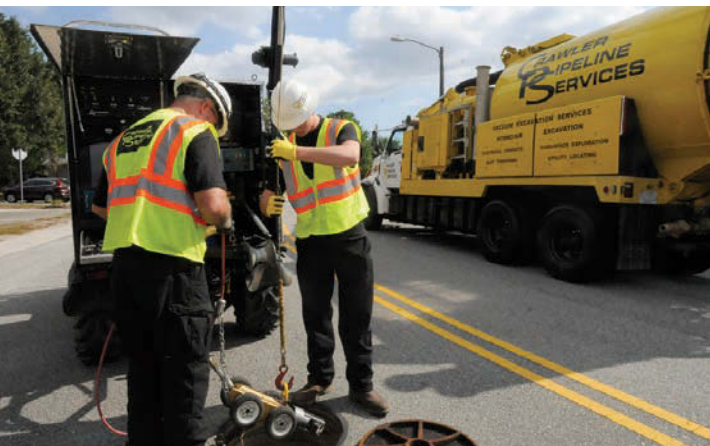
“We find that the municipalities are difficult to convince that hydroexcavation is something that would save time, money, and would avoid damage to existing lines buried in the ground. There is something of a stigma about this being muddy and nasty.”

Wayne Thompson

Their daughter, Lindsey, a college student, helped the startup family business by designing a website for the initial launch, and their son, Cody, a senior in high school, has worked in the field with his father learning about the technologies.

Thompson describes their game plan: “Initially for our inspection operation we acquired a used camera system from CUES that we had worked with before. Then we added another camera system from Cobra Technologies to enhance our capabilities.

“But other things kind of took over, and we decided if we were going to be a success we would need to have a vac truck, and that would best be a combination truck because we were not sure where we would be going in the marketplace with Crawler,” he says. “Things have progressed for us steadily from there.”



Crawler Pipeline Services Owner Wayne Thompson (left) and technician Cody Thompson insert a Cobra Technologies robotic camera through a manhole in a storm drain as the company's 1998 Vac-Con jet/vac truck moves into position.



Crawler Pipeline Services technicians Dylan Williams (left) and Cody Thompson attach a cleaning nozzle to the water supply line from their Vac-Con truck.



LEFT: Cody Thompson readies the camera rig to inspect a stormwater pipe. BELOW: Working from the Kubota RTV 900, technicians Cody Thompson, Dylan Williams and Trevor McGhee (from left) pull the inspection camera back through the manhole.



a local competitor who had been in business for a long time, and is a good friend, so we were careful not to step on too many toes as we moved ahead. I knew this was an important and good relationship to maintain. We began to pick up more municipal work in other locales, and to scout out the petroleum distribution industry.”

Although the petroleum distribution industry has long been on board with hydroexcavation as a safer procedure for exposing lines and other digging operations at their facilities, the Thompsons found an entirely different scenario for the municipalities they added to their customer list.

“We find that the municipalities are difficult to convince that hydroexcavation is something that would save time, money, and would avoid damage to existing lines buried in the ground,” Thompson says. “There is something of a stigma about this being muddy and nasty. They stick to the notion that it’s easier to use the backhoe, and then a shovel when they get close.”

Crawler is countering this resistance by revamping their website to include video demonstrations of the process. Thompson says that move has helped them gain the recognition and acceptance they need to grow the business.

“We would like to see hydroexcavation grow to 75 percent of our business, and right now it is just at 25 percent, with the balance in inspection and drain cleaning, jetting and CCTV,” Thompson says. “With our revamped website, we are encouraged we will see those numbers change as we change the perception of hydroexcavation.”

CITY BLIGHTS

The municipalities Crawler serves commonly deal with root intrusion, gravel deposits, infiltration, dislocated joints in the pipes and the more recent but growing problem of paper products in sewer systems.

profile

CRAWLER PIPELINE SERVICES, RALEIGH, N.C.



OWNERS: Becky and Wayne Thompson Jr.,
WBE, HUD Certified

OPENED: March 2012

SERVICES: CCTV, sewer inspection and cleaning, storm drain inspection, hydroexcavation

CUSTOMERS: Municipalities, petroleum distributors, contractors

EMPLOYEES: 5, including owners

WEBSITE: www.crawlerpipeline.com

Thompson says he had his eye on hydroexcavation and saw it as a wide-open opportunity for expansion. They purchased and rehabilitated a 1998 Vac-Con and began a promotional program touting the process through their website. Targeted clients spanned a 200-mile radius covering North and South Carolina and Virginia.

“For all our drain inspection and cleaning as well as the hydroexcavation, we were contacting the various customers we had dealt with in our previous experience,” he says. “Some had made it through the financial crunch and others were still in the business but working for someone else. We did have

“Unfortunately, people think the sewers will take anything,” Thompson says. “We’ve even seen people lift a manhole and dump materials. The cities are starting to use manhole covers that are locked.”

Thompson crafted a hydraulically controlled robotic vacuum unit that is guided by a camera. He sends the unit into pipes as small as 33 inches in diameter to deal with problems like clumps of paper products clogging a sewer line. Typically, Crawler inspects pipes from 4 inches to 96 inches in diameter. Thompson’s unit is about the size of a small riding mower. Once the substance causing the blockage is broken up and jetted out, it is taken to the treatment facility for proper handling.

Small gravel can generally be jetted out, but the unit can be used for root removal in some cases.

Thompson says that in almost all the jurisdictions they serve, city sewers are under some sort of revamp or rehabilitation. In Raleigh, Crawler is inspecting areas where old sewers are being relined.

Because Crawler Pipeline Services typically works as a subcontractor, they are often side by side on municipal jobs with relining companies or other rehabilitation contractors.

During the cleaning and inspection processes, Crawler typically works in live sewers. The technicians are all trained for confined-space entry because of the danger of hydrogen sulfide in enclosed areas.



Crawler Pipeline Services Owner Wayne Thompson works the controls of the Cobra Technologies robotic camera.

Recently, the company picked up a contract with a large municipality on the East Coast, performing extensive storm drain inspection and cleaning.

“Unfortunately, people think the sewers will take anything. We’ve even seen people lift a manhole and dump materials. The cities are starting to use manhole covers that are locked.”

Wayne Thompson

Electric Eel®

75 Years of Excellence

1939 **2014**

Based in Springfield, Ohio since 1939, we are proud to announce 2014 as our 75th year as manufacturers of professional quality drain & sewer cleaning equipment.

We are the originator of the Model C dual cable sectional drain cleaner, and have steadily grown and expanded our product line over the years in our Ohio manufacturing

facility, becoming a complete source for drain and sewer cleaning from drainlines to mainlines!

Our current product line includes a wide range of electric and gas powered sectional drain cleaning machines, drum style machines, high pressure water jetters and a full range of pipeline inspection systems and locators.

Our nationwide network of sales reps enables us to provide on-site demos as well as product training.

See us at PUMPER & CLEANER EXPO Feb. 24-27
& Register to Win a Model C Drain Cleaner!

1-800-833-1212 www.electriceel.com



Wayne Thompson inspects one of the company's inspection cameras on its mount on the modified Kubota RTV 900.

BREAKING OUT ON THE WEB

Soon after opening Crawler Pipeline Services with a basic website, owners Becky and Wayne Thompson realized that to promote their services in today's market they needed a much more sophisticated product to keep the site updated and to track, integrate and use social media such as Facebook and LinkedIn.

Becky began the search for a website designer by talking with other people in the industry and seeking their experience and suggestions.

"We ended up with a package that was user-friendly and included training," she says. "I had done a lot of reviewing other websites to see what we liked, and what we wanted to do."

It was important for Thompson to be able to regularly make changes on the homepage and throughout the site.

"I can go in and click a button and add a word or change a picture," she says. "I spend from three to six hours working on our website every week. I can make sure all our information flows. I still have help from our designer as I learn the whole process."

"You need things on your website so that your name will come up. Keywords like 'pipeline,' 'hydroexcavation,' 'drain cleaning' – all the things people are looking for. The videos let people see your equipment in operation. In making the design you need to attract people who are younger than 40 years old."

She says their videos are taken in the field by their own crew, always adhering to safety issues such as gloves, boots, confined-space gear and proper attire.

She discovered that the cost of hiring a professional designer can vary widely depending on various factors. Much of the cost is based on the training involved and individual needs.

"In this day and time, we think that promoting our company with our website is the best way to spend our advertising budget, and being able to spend some of my time each week to keep things current is time well spent and of great value."

The company's municipal contracts range from managing sewer line and storm drain inspections to being on stand-by for emergency situations. Each agreement is set up around the client's needs.

PIPELINE TERRITORY

In the petroleum industry, where hydroexcavation is the only way to go, Crawler is carving out an important niche. Digging with heavy equipment isn't allowed on these sites due to the prevalence of fuel and gas lines, fiber optics and wastewater lines. Sometimes the client might be adding new lines below and above ground, and they need holes dug for support brackets (poles) for overhead lines. Crawler also locates lines so that repairs can be made, and sometimes handles new construction and pipe repair. All of these jobs depend on hydroexcavation.

"I can truthfully say our vendors have been total lifesavers in providing parts and service, and in helping keep costs down and our customers happy."

Wayne Thompson

Most hydroexcavation work is planned, with emergencies, such as a broken oil or sewer line comprising a small amount of the business.

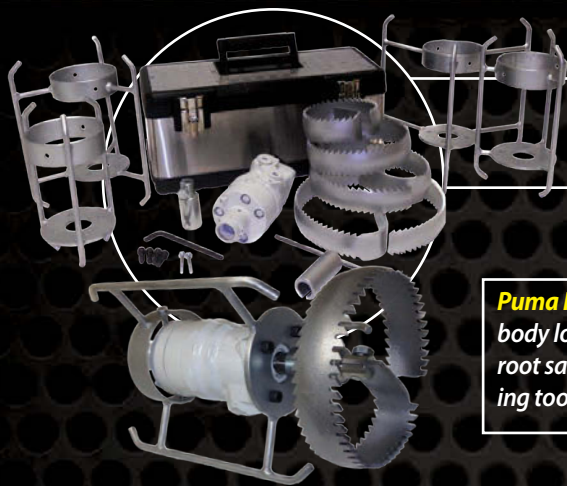
When a long-distance job opportunity comes up, whether in the pipeline industry or with a private contractor or municipality, Thompson must decide whether to visit the site before signing on or evaluate the job based solely on provided information.

"With our background we can make a good evaluation of the situation by getting as much information as we can, and considering the client we will be working for as well," Thompson says. "If there are any questions, I will jump into a vehicle and go to inspect the job. Probably about half the time we can make a determination without a visit."

CONTINUED >>

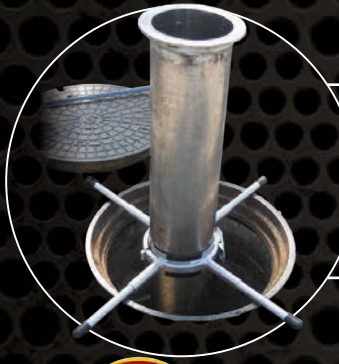
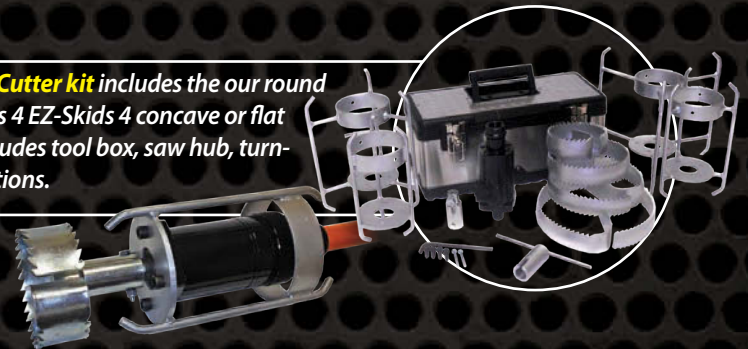
SOUTHLAND TOOL MFG. INC.

Building Innovative Tools for Municipalities



Puma Hi-Torque Hydraulic Root Cutter kit includes the hi-torque low speed motor with 235 ft/lbs. of torque. This kit includes 4 EZ-Skids, 4 concave or flat root saws in 6", 8", 10" and 12". Includes tool box, saw hub, motor turning tool, Allen wrench and instructions.

Puma Intelligent Hydraulic Root Cutter kit includes the our round body low speed motor. Kit includes 4 EZ-Skids 4 concave or flat root saws in 6", 8", 10" and 12". Includes tool box, saw hub, turning tool, Allen wrench and instructions.

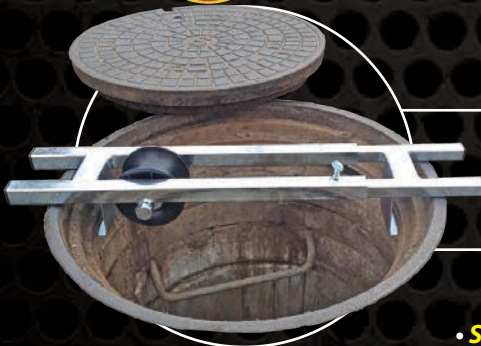


The "Deep-Vac" Manhole Tube Holder is a "Patent Pending" design that solves a constant and at times, dangerous situation. For manholes, catch basing and wet wells. Clamp the Deep-Vac around your tube in any location. The tube is then lowered into the manhole and supported by the Deep-Vac's 4 steel extension arms. Keep adding tubes and unclamp the "Deep-Vac" holder and move up and over the next flange connection.



BOOTH
3001

Puma Roller Grabber. Grabs your hose and nozzle, lowers them into sewer line or drop manholes and guides hose around a nice nylon roller. Bottom hooks are hardened. Connects to our fiberglass pole sets.



Adjustable Top Manhole Roller. This top manhole roller is unique in that it has two opposing clamps that grab the manhole ring from underneath. Since the roller is adjustable you can extend to clamps and create a fixed in place roller that won't "flip out". We see this as a safety improvement in addition to a new an innovative top manhole roller.

Southland tools also carries a large inventory of other items including:

- SEWER RODS • DEBRIS BASKETS • GRABBERS • HANDY CLAMS • CORKSCREWS • AUGERS •
- NOZZLE EXTENSIONS • HYDRO CUTTERS • SPOONS • DEEP-VAC HOLDERS & more!



Technicians Cody Thompson, Trevor McGhee and Dylan Williams (from left) retrieve the Vac-Con's suction tube from a manhole.

He says one of the most important issues once they take a job is to ensure they have support for the machinery with backup parts in case of a breakdown – a particular necessity for a company doing big things with a small field staff.

“We have a service truck where we carry a lot of parts. Things we think we might need. So this support is an issue,” he says. “We also have outstanding reaction from our vendors. Vac-Con has been particularly helpful. I can always pick up a phone and get someone. I can always get immediate support from Cobra Technologies; they have gone above and beyond to be there for us. We have a local vendor, Jet-Vac Sewer Equipment Co. in Sumter, S.C., that we can count on. I can call in the middle of the night and get someone. We can turn to Public Works Equipment and Supply Inc. with locations in North and South Carolina and Tennessee. Whether we are 50 miles from home or 200 miles from home, this is vital for us.

more info

<p>CUES 800/327-7791 www.cuesinc.com (See ad page 25)</p>	<p>Jet-Vac Sewer Equip. Svc. Cntr. 800/527-4469 www.jet-vac.com</p>
<p>Cobra Technologies 800/443-3761 www.cobratec.com</p>	<p>Vac-Con, Inc. 888/491-5762 www.vac-con.com (See ad page 3)</p>

“I can truthfully say our vendors have been total lifesavers in providing parts and service, and in helping keep costs down and our customers happy. Even with our service truck, we can never be sure to have every part available.”

When the company is on a long-term project at a distant location, heavy equipment is only left on site over a weekend if it is in a secure location. Otherwise it's taken back to the Raleigh yard.

POWER PUNCH

Crawler Pipeline Services hits the road with its 1998 Vac-Con combination truck with a 10-foot boom and hydroexcavation package and a 2009 Ford F-450 as the support vehicle.

Crawler's 2007 Kubota RTV900 4X4 is equipped with a custom-made camera housing with crane. The company also has a 2012 Cobra Technologies camera system with 1,000 feet of cable, and three additional cameras and transporters for different pipe sizes. From CUES there is the Inspector General Camera System with 1,000 feet of cable, plus an Ultra Shorty transporter with OZ11 camera as backup system. The Crawler Vac is a custom-made hydraulic robot with a CCTV system for confined-space entry. Crawler uses various push cameras with 1/5- to 4-inch capabilities.

Crawler also has a custom-made rubber tracked easement machine with a 700-foot hose reel and crane assembly for hard-to-reach outfall work.

ON CALL

The Thompsons run their 24/7 operation out of their home, with a nearby 1-acre lease for equipment. Wayne says his experience with equipment has been particularly helpful in the new company.

“Being on this side of the business, but with the utility background, I have been able to head off a lot of problems for other utility contractors as we interact on a job,” he says. “This has helped our contractors and co-subcontractors, and also promoted our business. We can sometimes save them time and money.”

Thompson says he's pleased with the progression of the business, even though there are things he would do differently if given the chance.

“I wish we had been able to spend more money on the vac truck – bought a newer truck. I would not have had to spend so much valuable time in the shop. That was a drawback. We did have to do a lot of rebuilding to get the truck to where we wanted it. I could have been out meeting clients and introducing Crawler Pipeline Services. But fortunately things have worked out. We are very busy. Becky does a great job running the office and dealing with myriad issues.”

Thompson's last bit of advice for anyone in the industry: “Be there when you say you will be there, do quality work and always tell the truth.” **C**

NEW TECHNOLOGY!



**BOOTH
5016**

LAMP II

*Lateral & Mainline Probe
with **NEW** Lateral Pan & Tilt Camera*

**PAN & TILT INSPECTION OF ALL
LATERAL CONNECTIONS,
WITH OR AGAINST THE FLOW!
SIMULTANEOUS PAN, TILT & ZOOM
INSPECTION OF MAINLINES!**



The system provides for easy entry into lateral services with "WYE" connections while inspecting with or against the flow! Navigate through multiple "wyes", bends, and sweeps!

- Self-leveling camera image is always upright; camera has 360 degree continuous pan and tilt capabilities
- Removable guide wand facilitates navigation through multiple wyes
- Built-in wiper system keeps the camera lens clean; no need to remove the camera from the pipe to clean the lens!
- Built-in directional lighting for detailed, clear viewing of all pipe conditions
- Built-in multi-frequency sonde transmitter



**Now available with
a rear-viewing camera!**

**Contact CUES for a
discussion & demonstration!
800.327.7791
www.cuesinc.com
salesinfo@cuesinc.com**



Torrent™ 3D heads now clean at up to 200 gpm

For tank cleaning jobs large or small, choose a Torrent™ 3D head from NLB. Their rotating water jets clean quickly and completely, with adjustable speeds and long-life seals that are easy to change.

- **Torrent 200** – up to 200 gpm and 20,000 psi
- **Torrent 50** - up to 50 gpm and 20,000 psi AND fits through a 6" opening

Torrent 3D heads offer a variety of nozzle arms, all designed for optimum coverage. For details, call **877-NLB-7988** today or scan the QR code below.

NLB Corp. *The Leader in Water Jet Productivity*

29830 Beck Road, Wixom, MI 48393

MI: (248) 624-5555, IN: (219) 662-6800, NJ: (856) 423-2211

LA: (225) 622-1666, TX: (281) 471-7761, CA: (562) 490-3277

www.nlbcorp.com • e-mail: nlbmkgt@nlbusa.com



FORBEST Holiday Season Promotion!

Dear Customers:

To reward our old and new customers we offer special deals for this holiday season:

Deal 1: Just launched! New model FB-PIC 3588A for only **\$2,250**

Deal 2: Buy FB-PIC 3188D/130', get a powerful 512 Hz Sonde transmitter for **FREE!**

Deal 3: Buy FB-PIC 3288 BT get a camera head adapter and a 7" color camera head with built-in 512 Hz transmitter for **FREE!**

FB-PIC 3588A



- 7" color LCD control station with SD recorder and built-in battery
- 16" cable reel with built-in electronic meter counter
- 150' / 5/16" fiberglass push cable
- 7/8" color camera head with built-in 512HZ sonde transmitter

Holiday Price: \$2,250

FB-PIC 3188D / 130FT



- 7" color LCD control station with built-in DVD recorder and battery
- 130' / 1/4" fiberglass push cable
- 7/8" color camera

Buy this set, get a powerful 512Hz transmitter for FREE

FB-PIC 3288BT



- 10" color LCD control station with built-in DVD recorder and battery
- 28" cable reel with built-in meter counter
- 300 FT / 3/8" fiberglass push cable
- 1 1/2" self-leveling color camera with built-in 512Hz sonde transmitter

Buy this set, get a camera head adapter and a 7/8" color camera head with built-in 512Hz sonde transmitter for FREE

315 Harbor Way, #B
South San Francisco, CA 94080

Tel: 650 757 4786



www.forbestusa.net

Email: forbestusa@gmail.com



TOUGH. TRUSTED. TRENCHLESS.

STATIC PIPE BURSTING



FROM 38 TO 175 TON MACHINES

PNEUMATIC PIPE BURSTING



SYSTEMS FOR BURSTING PIPE UP TO 36"

PIPE RAMMING/HDD ASSIST



INSTALL STEEL CASINGS, RESCUE
STUCK HDD BORES AND MORE!

LATERAL PIPE BURSTING



REPLACE 4 & 6" LATERALS

HYDROGUIDE® WINCHES



FOR BURSTING AND LINING APPLICATIONS



HammerHead, a leader in unique answers for underground utility installation and replacement since 1989. Genuine HammerHead Trenchless equipment is available direct from HammerHead or at your local authorized dealer.

FIND YOUR LOCAL DEALER AT HAMMERHEADTRENCHLESS.COM OR CALL 800.331.6653.

     **MOLING | RAMMING | BURSTING | HDD ASSIST | WINCHES**





A chain and excavator boom help lift a 20-inch rock reamer as workers break apart the bore assembly in preparation for pulling drill rods to the south side of the Fox River power canal in Menasha, Wis. (Photos courtesy of Waas Boring and Cable)

Rock of Ages

Horizontal directional drilling ensures northeastern Wisconsin customers receive an uninterrupted water supply

By **Scottie Dayton**

The Menasha (Wis.) Water Utility wanted to connect the Water Street distribution main on the north side of the Fox River power canal to the River Street main on the south side. The loop would provide another means of distributing water to the narrow dike if officials had to close the main supply valves.

Dorner Inc. in Luxemburg, Wis., won the general contractor bid, and subcontracted the horizontal directional drill under the canal. After workers bored down 17 feet through clay, they hit solid limestone and stalled. Unable to complete the bore, they filled in the pits and left.

Superintendent Todd Dorner called Randy Waas, vice president of Waas Boring and Cable in Lomira, Wis. “Although we had the equipment and expertise, we hadn’t bid the job because of its difficulty,” says Waas. A team of seven worked three weeks to bore 400 feet before pulling in an 18-inch HDPE pipe.

PROPER EQUIPMENT

The project required a D100x120 and a D50X100 Series II Navigator directional drill (Vermeer), a 20-foot-long mud motor (SlimDril International), three custom-built rock reamers (Century Products), three vacuum excavators

tough job

PROJECT: Install 400 feet of 18-inch HDPE pipe through rock and under a canal

CUSTOMER: Menasha (Wis.) Water Utility

CONTRACTOR: Dorner Inc., Luxemburg, Wis.

SUBCONTRACTOR: Waas Boring and Cable, Lomira, Wis.

EQUIPMENT: Series II Navigator horizontal directional drills
Vermeer Corp.

888/837-6337

www.vermeer.com

RESULT: Water loop installed

and a twin tank MCM-4000 reclaimer (American Augers). The latter mixes, cleans and transfers drilling fluid.

After the crew excavated pits in parking lots on both sides of the canal, drill operator Ed Feucht followed the preestablished bore path using the D100 machine set up on the north side. “Our biggest challenge was getting the pilot hole through to the other side,” says Waas. “Ed was boring down at a 30-degree pitch, an angle sufficient enough to deflect the 8-inch bit if he didn’t engage the limestone just right.”

CONTINUED >>

One Call Can Do It **ALL!**

**30-DAY
GUARANTEE**

Don't waste time hunting for plumbing and drain products. Duracable's wide array of equipment and supplies can get you what you need. Including one of the most respected names in the business ... RIDGID.

- Tough, reliable, made in the USA Drain Cleaning Equipment, Cable, Blades and accessories.
- Drain Care Products
- Camera Systems
- Locators
- Virtually anything you need to run your sewer-drain or plumbing operation.

We
Build
Reputations™

RIDGID®

Looking for more? Just give us a call
at 877-244-0556.



**BUILT
U.S.A.
TOUGH**

Duracable®
Manufacturing Company

877-244-0556 • www.duracable.com



ABOVE: A hydroexcavator from Valley Hydro-Excavation in Campbellspport, Wis., helps a Waas vacuum tank trailer pump drill fluid from the exit pit. **RIGHT:** The custom-built 20-inch rock reamer has six carbide Tri-Cone bits with large cone offsets, chisel-shaped inserts, and irregular tooth spacings. Fins ahead of the reamer keep it centered in the smaller hole.



Waas used a mud motor with low speed/high torque gear reduction to provide additional power to the bit. The configuration reduced the output speed of the 1:2 lobe high-speed positive displacement hydraulic pump by a factor of three, and increased the output torque by the same multiple. The system converted hydraulic power to mechanical power and maintained consistent bit speed as Feucht applied pressure to it.

SLOW AND EASY

Eric Feucht used a Digi-Trak Eclipse locator (Digital Control) to track the sonde on the mud motor. Meanwhile, workers at the bore pit added bentonite and water to the reclaimer's mixer to create a slurry. When the bit was about 6 feet from entering the limestone, Ed Feucht started the mud pump on the drilling rig, sending the slurry through the rods to the drilling motor, which rotated the bit.

As the fluid circulated to clean the motor, he advanced the bit until it touched the rock, then slowly increased the pressure against it. "It's takes patience and experience to get the mud motor to start cutting into rock," says Waas. "Ed had to take his time and let the bit do its job."

The rig's pressure gauge enabled Feucht to monitor how the drilling motor

was performing, and another gauge gave the weight on the bit, as an excessive amount could damage the mud motor's on-bottom thrust bearings. Feucht tried to drill with a steady pump pressure and flow rate of 3,000 psi/170 gpm. The work was so demanding that the bore advanced only 50 feet per day.

After traveling another 8 feet at the same pitch through solid rock, the bit broke through under the canal. The next challenge was to level off in a short radius at 25 feet deep, then bore 250 horizontal feet before beginning the 30-degree ascent to the exit pit on the south side of the canal. The bore exited at 9 feet deep and precisely on target.

MUD, GLORIOUS MUD

As slurry flowed into the exit pit, workers used a Vermeer vacuum tank trailer with a 1,200-gallon spoils dump tank to transfer the liquid to the 5-foot-

CONTINUED >>

Don't show up to a job
unprepared.



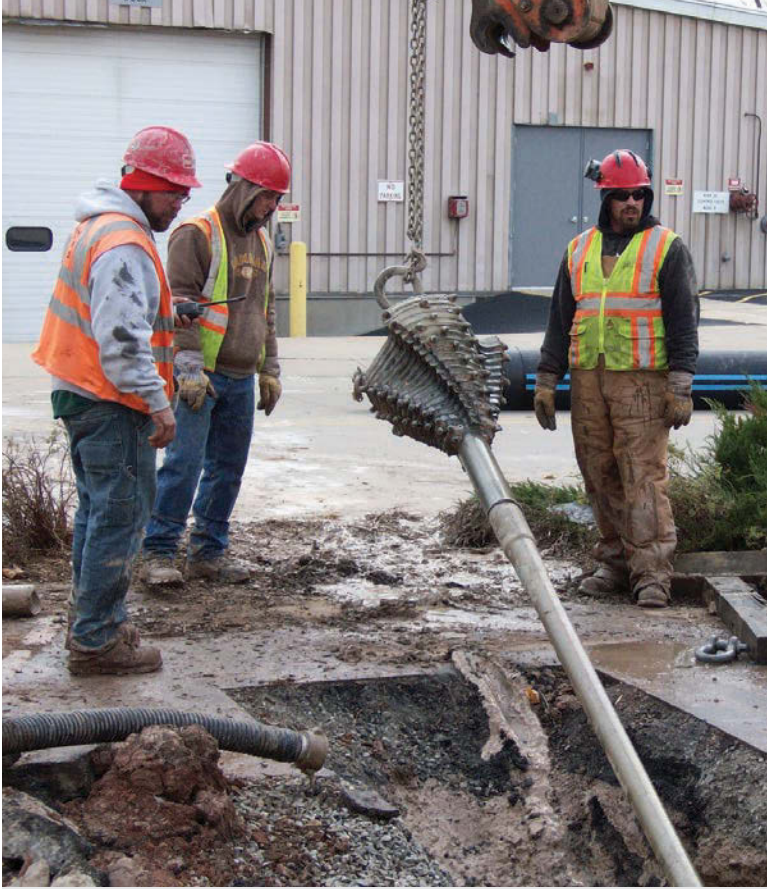
Stock your equipment with the right parts to get the job done.

Think of FS Solutions® as your personal **Parts Supplier** for all makes and models of
Industrial Vacuum Loaders, Vacuum Excavators and Waterblasters.

7 locations - same day shipping - huge inventory - competitive prices - expert technical and application advice.



fssolutionsgroup.com • (800) 822-8785



ABOVE: Eric Feucht (left) uses a walkie-talkie to direct the excavator operator as he lowers the 26-inch fluted reamer into the pit. **RIGHT:** The Vermeer D50X100 rig with the trailing rod.

“Ed was boring down at a 30-degree pitch, an angle sufficient enough to deflect the 8-inch bit if he didn’t engage the limestone just right.”

Randy Waas



deep reclamation pit on the north side. A pump in the 4,000-gallon reclaimer sucked up the fluid and sent it to the 1,333-gallon screening tank, in which three 50-mesh shaker screens and two 140-mesh shaker screens separated clay and silt from the debris.

Next, the bentonite mixture was pumped through seven desilter Hydro-Cyclones before entering the 2,667-gallon cleaning fluid/mixing tank. A charging pump in the tank transferred the slurry to the mud pump on the drill rig parked alongside. The project used 15,000 pounds of bentonite.

“This was a double-entry or surface-to-surface bore,” says Waas. “Once we removed the mud motor, we attached a 12-inch rock

lansas[®] PRODUCTS

MANUFACTURED BY VANDERLANS AND SONS, INC.



High & Low Pressure Joint Tester



“Smart Box™” Line Acceptance Test Kit



“Super Vac™” Manhole Vacuum Testing



Vacuum Test Plate with Protective Cover

reamer to the drill string and began pulling it north toward the D100 rig.” As it advanced, the D50 operator on the south side attached a drill rod to the trailing end of the string, enabling workers to attach the next size reamer without leaving the borehole open and subject to unrecoverable collapse.

The 12-, 20- and 30-inch rock reamers each had six carbide Tri-Cone bits. Their large cone offsets, chisel-shaped inserts and irregular tooth spacings ground rock into fine gravel, enabling it to flow out of the borehole and into the exit pit. Four fins symmetrically spaced ahead of the reamer centered it in the smaller hole, ensuring that the bits cut evenly.

CRANK UP THE VOLUME

Pumping 170 gpm of drill mud quickly filled the 5- by 6- by 9-foot-deep exit pit. Besides running the company’s two vacuum excavators, Waas hired a hydroexcavator and operators from Valley Hydro-Excavation in Campbellsport, Wis., to help transport the flow to the reclamation pit.

“When a reamer arrived on the south side, we removed it and tied on rods as the D100 pulled back the string,” says Waas. “Bores always run in one direction.” Each of the three upsizes took a day and a half.

A field service technician from supplier Ferguson Waterworks in Appleton, Wis., had fused the 40-foot-long HDPE pipe sections for the initial boring contractor. “We fused our pulling head onto the pipe, then used the Hitachi excavator arm to bring the head around while the John Deere 544H payloader guided the pipe into the pit at the proper angle,” says Waas. “HDPE pipe is very flexible and a good material for directional boring, especially when there are severe entry and exit angles.”

Workers then shackled the pulling head to a 26-inch fluted reamer that



A John Deere payloader guides the 18-inch HDPE pipe and feeds it into the hole from the street, while a green tracer wire slides in beside the pipe.

would further break up material as it was pulled through and facilitate flushing it out. As the pull began, a backhoe suspended the mechanical joint fused at the end of the pipe to prevent it from dragging against the asphalt. “We didn’t worry about damaging the pipe because the wall is 1.25 inches thick,” says Waas.

After the pull, the crew fused a mechanical joint to the head of the pipe. Utility workers then connected the joints to the PVC mains to establish the desired loop. **c**



is announcing the opening of our **NEW Houston, Texas, location.** We’re growing along with you to help you meet the needs of your business.



AR™ Plugs



High Pressure Plugs ~ to 150 PSI



Multi-Size Domeheads™ Front and Back Plugs

Custom Designs Are Always™ Available

VANDERLANS AND SONS, INC.

California 1-800-452-4902

Atlanta 1-770-509-9309

Minneapolis 1-763-428-9290

Houston 1-832-804-6932

www.lansas.com



ONE TOOL DOES IT ALL

DESTROYS ICE, GREASE, ROOTS, DIRT AND DEBRIS.

RATED TO 5K PSI OR HIGHER



2-6" LINES

4-18" LINES

8-36" LINES



SEE YOU AT THE PUMPER!
Visit StoneAge in Booth #5130
February 24-27, 2014



SINGLE SOURCE SUPPLIER



800.421.4580 | draincables.com



TOUGH JOBS TOUGHHER TOOLS



ONE CALL

1-800-231-3628

For all your water jetting needs.
ALL of them.



GD

GARDNER DENVER
WATER JETTING SYSTEMS, INC.

(1) 281-448-5800 Phone
(1) 281-448-7500 Fax
(1) 800-231-3628 Toll-free U.S. & Canada

www.waterjetting.com



See the Stars in Indy

NFL Combine gives football fans extra incentive to attend the Pumper & Cleaner Expo

By Cory Dellenbach

So, you're attending the 2014 Pumper & Cleaner Environmental Expo International in late February, you've arrived a few days early and are looking for something to do, right?

You don't have to go too far if you're an NFL fan. Just look to Lucas Oil Stadium where the 2014 NFL Combine will be taking place – the combine and the Pumper & Cleaner Expo overlap by two days.

It'll be the third straight year the NFL will be distributing tickets for the scouting combine that is held each February in Indianapolis and draws the best college athletes hoping to make it onto an NFL roster.

In 2012, the NFL opened the scouting combine to 250 and demand was so high that the NFL increased the number of tickets available to 600 and fans could be allowed in for two days instead of just one.

This year, NFL officials are saying more tickets could be available. Those tickets would either be sold via a ticket outlet such as Ticketmaster or, as done in the past, fans would need to write an essay saying why they deserved the ticket. Those plans weren't finalized by deadline, according to Corry Rush, AFC Football Communications Director.

“Fans will see coaches, general managers and college athletes walking around the hotel, through the convention center and around that area of Indianapolis.”

Corry Rush

“The NFL is looking for real, die-hard fans to be a part of this opportunity,” said Rush.

Fans getting tickets will get a chance to see some of the top draft prospects – Louisville quarterback Teddy Bridgewater; South Carolina defensive end Jadeveon Clowney; Texas A&M tackle Jake Matthews; Clemson wide receiver Sammy Watkins; and UCLA linebacker Anthony Barr.

“It's the ultimate job interview,” said Indianapolis Colts General Manager Ryan Grigson.

Fans could watch the 40-yard dash for quarterbacks, wide receivers, offensive linemen and tight ends, and position skill drills.

The NFL Scouting Combine has been growing in popularity over the last several years. In 2012, more than 6.5 million people watched on the NFL Network and ESPN. Last year, more than 7 million watched.

There aren't too many outdoor activities centered around the NFL Combine, but if you're attending the Pumper & Cleaner Expo and book your hotel room early, you have a chance to stay in the expo's host hotel the JW Marriott – which is also the host hotel for the NFL Scouting Combine.

“Fans will see coaches, general managers and college athletes walking around the hotel, through the convention center and around that area of Indianapolis,” Rush said.

The NFL Combine will be held from Feb. 18-25 this year, while the first day of the Pumper & Cleaner Expo is Monday, Feb. 24 with Education Day.

The Expo will return to the Indiana Convention Center – connected to the JW Marriott – Feb. 24-27, 2014, again showing off the latest products and technologies in the environmental services industry.

Early registration costs just \$50 until Jan. 24. At-the-door registration is \$70 for the full program. To find out more, visit www.pumpershow.com or call 866/933-2653. **c**

GET MORE JETTER FOR YOUR DOLLAR!



Honda 690cc Skid Models
Starting at
\$4995



STB2511H-Hot Trailer Jetter
11 gpm @ 2500 psi
400' x 1/2" hose on power reel
250' x 3/8" on manual reel
690 cc Honda Engine
Hot Water Jetting at 8 gpm.
\$17550.00

SK2512 Trailer Jetter
12 gpm @ 2700 PSI
745 cc Kawasaki Engine
fully equipped for
\$8995

See more than 50 models and custom built jets on the web
www.camspray.com 800-648-5011

Introducing the Next Generation Sewer Inspection System

NGx10

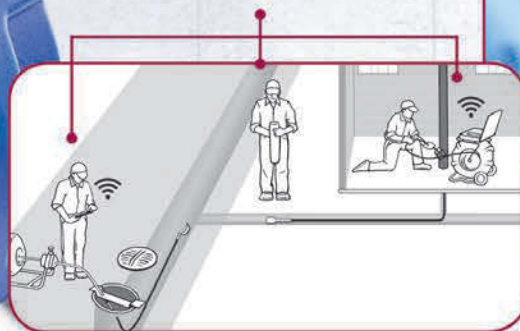


**Color Self-Leveling
1 1/2" diameter
camera head**


200' of push rod

**Wireless
Streaming Video**

**Streams video and
transmits 512hz signal
at the same time**



**Partner the NGx10
Inspection System
with MyTana's
ML2011 AccuCane
512 Locator**

 **Made in the U.S.A.**



Request your
**FREE, FULL LINE
catalog today!**
800.328.8170



1.800.328.8170

**Factory Direct
Customer Service**

Competent • Polite • Clear
(M - F 7 am-5 pm CST)

MyTana

Professional grade tools for sewer & drain professionals

www.MyTana.com

CABLE MACHINES • JETTERS
PUSH CAMERAS FOR MAIN LINES
& DRAIN LINES • LOCATORS
RELATED PARTS • ACCESSORIES

SEWER EQUIPMENT
SALES | RENTALS | SERVICE | PARTS
 EASTON, MD BALTIMORE, MD
 CLINTON, MD PITTSBURGH, PA
 CHESTER, PA CHESAPEAKE, VA

Mid-Atlantic Waste Systems YEAR-END BUYING EVENT

800.338.7274

www.mawaste.com

Aries Saturn III Color Push System



- Case Unit Included
- Push Reel Assembly
- Saturn III LED Camera
- Camera VD1000 Upgrade

John Bean Sprayers Sewer Jet JB7040D



- 40 GPM at 2000 PSI
- 80 HP John Deere Diesel
- KEG Nozzle Upgrade Pkg.
- Hydrant Fill, Washdown Hoses

MAKE AN OFFER!

TV Ferrett Portable Machine Camera System



- Mainline Camera
- Screen Footage Counter
- DVR Recording
- 600' Mainline Cable

MAWS_102

MUNIXS
PACP SURVEY SOFTWARE

XTremely Fast & Easy PACP Surveys

This Xtremely simple and affordable solution is an excellent choice for those new to pipe survey reporting and data collection.

Create data CDs and DVDs within the program to share your movies, pictures and reports without any installation of third party program.

A built-in wizard to guide the user through the required fields and survey process to eliminate the guesswork.

Call Today for More Info or a Free Online Demo **866.299.3150** | www.pipelogix.com

Soil Surgeon Inc.

X1

The Most Powerful Hydro-Excavating Tool On The Market

X2

Storm Drain Separator Cleaner

Features Include:

- 6' Aluminum Tube
- Handles for easy maneuvering
- Water ring tips boring inward to cut the soil & outward to get tube down
- Bumpers on bottom to protect tips & lines

Now clean storm drain walls, filter screens and basin bottom using one tool in minutes

- Jets bore upward & outward for easy cleaning
- No man entry needed
- No awkward spray wand

Patent #6,484,422B1

Fits all truck manufacture designs
 Quick Connects To 8" or 6" Boom

You Control Water Flow, Pressure & Power With the Truck's Controls
 Designed To Cut Through All Types Of Soil

Call for a FREE Video and Information of Where Your Nearest Distributor is Located
949-363-1401 Fax 714-434-9998 www.soilsurgeon.com

Get Plugged In

AFTERMARKET CONNECTORS • CABLES

[ALL cables and connectors are individually inspected and tested before shipment.]

REASONABLE PRICES

Seacon/
Turck

ORCA TOUGH CABLES

504 738 7833 p/f • jfowler307@aol.com
www.OceanquipLLC.com

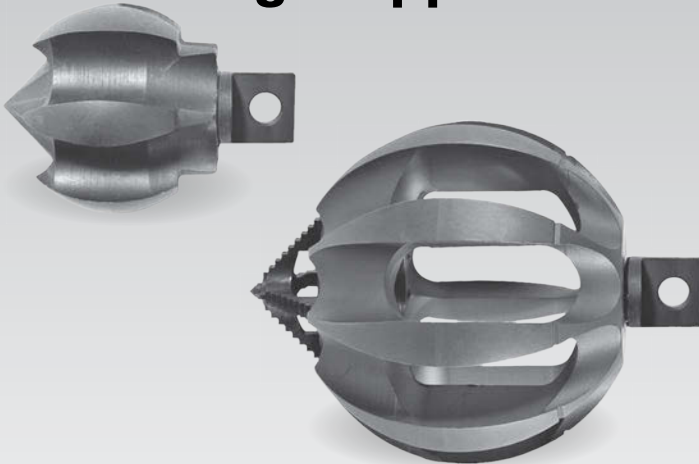
THE CABLE CENTER • 1-800-257-7209



**24 HOUR TURNAROUND - MIDWEST'S LARGEST FACTORY AUTHORIZED
REPAIR CENTER FOR GEN-EYE, GATORCAM & SEESNAKE**



ClogChopper™



- Multi-function cutting tools
- Six self-sharpening blades
- Risk-free pipe damage
- Maneuvers around tight bends
- Safe cleaning on metal, plastic and clay pipes
- Variety of sizes
- Connector options for most drain cleaning machines

CALL FOR PRICING!

NEW Gen-Eye Hot Spot™ Pipe Locator



- Easy to read display – Icons lead you to your target and auto backlight lets you locate in dimly lit areas.
- Total field antenna array – Allows you locate from any direction.
- Line direction compass – Tells you the lay of the pipe.
- Industry's most rugged locator – Rated IP65, the industry's highest, it is dust and dirt proof and water resistant.
- Superior Battery Life – Batteries lasts twice as long as other brands.
- Expanded Frequencies – Locates two sonde frequencies, two power frequencies and four line frequencies.
- Upgradeable Software – Use the USB port to upgrade software in the field.

CALL FOR PRICING!



General J-2900
Basic Unit Machine Only

\$2745
FREE DELIVERY



General J-1450
Portable Jetter
Basic Unit Machine Only

\$1540
FREE DELIVERY



Mini-Rooter XP™
Basic Unit – No cable cutters
or power feed

\$580
FREE DELIVERY



General Speedroooter 92™
Basic Unit – No cable cutters
or power feed

\$1160
FREE DELIVERY

A Protected View

Operators need to take proper precautions to prevent unnecessary damage to CCTV equipment

By Jim Aanderud

One of the most challenging aspects of managing a pipeline inspection program is controlling repair costs. CCTV inspection cameras are very complicated electronic devices, and repairs can be very expensive. Your company's bottom line will be adversely affected if frequent repairs are required.

The long-term cost of running the equipment is seldom considered when a pipeline inspection van is purchased. Manufacturers typically offer a one-year warranty on the equipment, but ongoing costs are a big part of ownership and should be taken into account when forecasting into the future.

The truth is that CCTV inspection equipment is delicate. The manufacturer may demonstrate the strength of its construction by banging on it or dropping it from a few inches off the ground, but these demonstrations are done with brand new equipment that hasn't experienced the wear and tear of regular use.



CCTV inspection equipment is most commonly damaged during insertion and removal through the manhole. Proper training and care is critical to keeping your operation up and running. (Photography by Jim Aanderud)

The fact is that most CCTV cameras and crawlers are equivalent in cost to a luxury car. If your technicians were lowering a car into the manhole, there's no doubt that they would be much more careful.

Most CCTV inspection equipment works hard. It is placed in manhole after manhole to inspect thousands of feet of pipeline day in and day out. If treated properly, inspection equipment will run for long periods of time, but when it's not, it will spend much of its time at a repair facility and cut deeply into your bottom line.

The sad truth is that 90 percent of required repairs are due to human error. This can be very frustrating for management because of the incurred cost and downtime.

REDUCING REPAIR COSTS

The first step in reducing repair costs is providing proper training. Every operator and employee on the support staff must be well versed in equipment operation and handling.

The next step is to address "pride of ownership." It's important to help your employees understand that the equipment they control belongs as much

to them as it does to you. They need to recognize that the mishandling of the equipment will affect them financially in the loss of bonuses and raises.

Over time, some employees become indifferent to the delicateness of the CCTV equipment they operate. Carelessness sets in and they begin to lose perspective of the value of the equipment and start treating it like a pry bar or a manhole hook. It is the supervisor's job to remain vigilant of this indifference and take corrective measures immediately.

The fact is that most CCTV cameras and crawlers are equivalent in cost to a luxury car. If your technicians were lowering a car into the manhole, there's no doubt that they would be much more careful. Regularly reminding them of the value of the equipment and the cost of repairs can be helpful.

UNDERSTAND THE CAUSE

What is the number one way in which CCTV inspection equipment is damaged? Some will say running it down a line and punching through root balls. Others will say driving around town with the equipment bouncing in the back of the van, but equipment is most commonly damaged during insertion and removal through the manhole.

Cameras are accidentally dropped and wind up crashing into the bottom of manholes during this process. A simple wrong step can cause an individual to drop the camera onto the pavement. But the most common cause of damage is when the camera is allowed to bang against the side of the manhole while lowering it in or pulling it out.

Striking the camera against the sidewall of a manhole may seem harmless at the time. Most of the time the lights are still burning, video is still running and the tractor is still crawling. With a sigh of relief the operator will reinsert the camera into the manhole and continue the inspection. But what they don't realize is that the pressure inside the camera has been compromised. Positive pressure keeps water out of the inside of most cameras. Once the seal has been broken and the pressure is released, there is nothing to prevent water from entering the camera. And we all know what water does to electronics.

After an incident like this, most operators will assume the equipment is still working properly and continue the inspection. But the first time the camera goes underwater, whether it is that day or a few days later, moisture will reach the electronics and the camera will go down. Operators will assume it is due to a random and unavoidable malfunction. Managers are usually told the camera was just running down the line when it suddenly went out. Since the camera didn't stop working right after it struck the sidewall, there will be no understanding of the real cause of damage. The cost of the repair will be in excess of \$5,000, and operators will continue to handle the equipment roughly, making it likely the incident repeats itself.

THE RIGHT WAY

It's important to ensure that the rope and cable are perfectly vertical when lifting the camera out of the manhole. If they are at an angle the camera will swing and strike the side of the manhole. If the camera begins to swing, it's important to lower it back down to stop the momentum. If that is not possible, staying motionless until the swinging diminishes will be helpful. Sometimes the motion can be counteracted with the rope or cable in order to stop the swinging.

CCTV equipment can be very heavy, so the best way to maintain control is to have two people on hand to lift and lower the camera. Many inspection vans come equipped with a winch. This can help facilitate the insertion and removal of the camera, but the same precautions should still be taken. Even with a winch, the camera can swing and strike the side of the manhole.

When finishing an inspection run and beginning another from the same location, the camera must be lifted and turned into the secondary invert. It is very common to sustain damage during this process because the camera must swing around in order to line up with the new pipe. During this process, the camera will tend to turn quickly when the support rope and the tractor cable are overlapped, so this has to be done slowly and carefully to protect the equipment.

Sometimes conditions increase the potential for damage. For example, not all manholes are perfectly vertical. Some are built at an angle while others can have unusual configurations that make them difficult to work with or don't allow a vertical drop because the invert is beyond the reach of the rope. Most crews tend to swing the rope back and forth across the manhole structure until the camera swings far enough to be dropped into the invert. This can be very dangerous. The safest way to perform this task is to use poles in order to gradually

and carefully push the camera into place.

Most of the damage inflicted on CCTV inspection equipment is caused by individuals who lack training and experience. Without proper instruction, operators will not understand the necessary precautions and will invariably and unintentionally damage the equipment.

By ensuring that the equipment is handled properly, a CCTV inspection program will be able to meet its goals and minimize repair costs. **C**

ABOUT THE AUTHOR

Jim Aanderud is owner of Innerline Engineering, a video pipeline inspection company based in Corona, Calif.

conductor
THE SINGLE SOLUTION

FROM LATERALS TO MAINLINES TO STORM DRAINS...

RS Technical Services Inc.
Design and Manufacture of Video Pipeline Inspection Systems
800.767.1974 | rstechserv.com

- Cameras
Pan & Tilt, Zoom, Lateral Launch Well and Panomorphoc
- Tractors / Transporters
Wheeled, Track and Steerable
- Jet Cam Systems
- Tap Cutter Controller
- Mini Mainline Systems
- Mainline Systems
- Laser & Sonar Profiling
- Vehicles & Trailers
- Software
now available through
HGACBuy.com
THE SMART PURCHASING SOLUTION



Pipeline Cleaning & Maintenance Equipment *for*

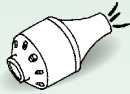


JETTERS & JET VACS



Penetrators

1/4"-15°	\$24.00
3/8"-15°	\$33.00
1/2"-25°	\$46.00
1/2"-25°LT	\$49.00
3/4"-12°	\$59.00
3/4"-12°LT	\$69.00
1"-12°	\$72.00
1"-12°LT	\$84.00



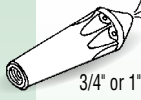
Aluminum Sand

3/4"-24°	\$141.00
1"-17°/24°	\$156.00
1"-24°	\$141.00



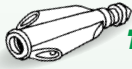
Swivel Joints

T-M® Style	
90° or Straight, 6000 psi	
3/4" & 1"	\$198.00
1-1/4"	\$210.00
1-1/2"	\$560.00
2"	\$807.00



Swivel Joints

3/4" or 1"-17°\$125.00



Truder

3/4" or 1"-17°\$350.00



Shark

1"\$495.00
1" Big Shark\$610.00

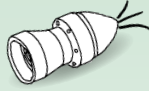
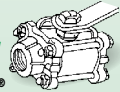
Stainless Steel Nozzles

1/8"	\$37.00
1/4"	\$41.00
3/8"	\$45.00
1/2"	\$57.00
3/4"	\$91.00
1"	\$116.00

Ball Valves

Dyna Quip® Style
3000 psi

1"\$227.00



Radial Bullet

3/4"-18° or 35°	\$50.00
3/4"-18°/24°	\$53.00
1"-18° or 30°	\$69.00
1"-15° or 30°	\$69.00
1-1/4"-18 or 35°	\$85.00



Steel Sand

1"-12°\$73.00

NEW Storm/Culvert Floor Cleaner Nozzles

Parker & Piranha Jetter Hose

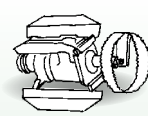
1/8"-1-1/4"



Swivel Joints

4" - 18"

NEW Chain Root Cutters
4"-48", All Stainless Steel, No Lubrication



Root Cutter Assemblies

Skid Mounted
w/flat blades.....\$1175.00
w/concave blades.....\$1198.00
w/spiral blades.....\$118.00

Donut Mounted
w/flat blades.....\$1125.00
w/concave blades.....\$1160.00
w/spiral blades.....\$1160.00

Lateral Mounted
w/flat blades.....\$1020.00
w/concave blades.....\$1075.00
Assemblies come with one ea. of 6, 8, 10 and 12" blades, saw blades, hub, skids, etc.

Sewer Hose Guides

TigerTail™ Style
3" x 36".....\$40.00
2" x 36".....\$34.00
with 24' rope



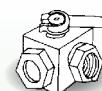
Clamps

Power Clamps
8".....\$13.00
3"-6" available

King Clamps
8".....\$29.75
4"-6" available

Bandlock® Clamps
8".....\$24.00
3"-6" available

Quick Clamps
8".....\$26.50
3"-6" available



Hycon® Valves

2 & 3-way Ball Valves

5000 psi	
1/2" 2-way	\$65.00
3/4" 2-way	\$89.00
1" 2-way	\$119.00
1-1/4" 2-way	\$226.00
4500 psi	
3/8" 3-way	\$115.00
1/2" 3-way	\$160.00
3/4" 3-way	\$180.00
1" 3-way	\$190.00
1-1/4" 3-way	\$440.00
2" 3-way	\$690.00



HD Washdown Gun

25 gpm @ 850 psi
1/2" Inlet.....\$170.00

Pipe/Sewer Plugs • Hose Reels • Aluminum Intake Tubes
Kanaflex™/Rubber Debris Hose • Full Line Of Warthog Nozzles

Toll Free: **800-365-6583**
www.cloverleaftool.com

Full Catalog Online with Prices



SARASOTA, FLORIDA • PHONE: 941-739-0707 • FAX: 941-739-0001



MANY OTHER STYLES, SHAPES & SIZES AVAILABLE

CALL FOR OUR COMPLETE CATALOG WITH PRICES

ultra ultra ultra
LIGHT – VERSATILE – SAFE

ultraSHORE
PRODUCTS



Quick to Install.
As light as 130lbs.



Roll Your Own.
Optional wheel kit.



Stacks easily with
2' & 4' high panels.

This is What Aluminum Shoring Was Meant to be!



1-800-683-8837

1-800-SHORING

CALL TOLL-FREE NATIONWIDE • 1-800-746-7464

www.shoring.com

COAST MANUFACTURING

Professional-Grade Drain Cleaning Machines, Cables & Accessories



Drain Cleaning Machines

- ▶ Heavy duty construction
- ▶ The most powerful motor in the industry
- ▶ Quick and easy reel changeover
- ▶ A one year rock-solid warranty



Cables

- ▶ Fabricated from high quality wire
- ▶ Most ends & couplings available
- ▶ All sizes and lengths
- ▶ Innercore available

COAST MANUFACTURING

www.coastmanufacturing.com

1.800.541.7015

AMAZING MACHINERY

Your Equipment SUPERSTORE Since 1995



130' SEWER CAMERA with 512HZ SONDE

SYSTEM INCLUDES

- » 7" Flat Screen LCD in ABS Case
- » Records to SD card (NOT INCLUDED)
- » High Quality Color Camera
- » 1-3/8" Diameter Camera Head
- » 512 Hz Sonde Transmitter (8'-15')
- » Stainless Steel Camera Body With Sapphire Lens
- » Water Resistant Camera Head
- » 9 White LED Lights w/Dimmer
- » 12" Steel Spring Leader
- » 130' long, 3/8" Super Slick Push Cable
- » 20" Storage Reel
- » Operates On 120 Volt Electricity
- » Two Year Mfg. Limited Warranty

SALE Price
\$1995.00

**Sewer Camera
Repair Center Now Open**

Add This Locator
to Any Camera!

Only **\$589.00**



Complete Details At
www.AmazingMachinery.com

1-800-504-7435
2160 S Lee Hwy. • Cleveland, TN 37311

Working Without Water

Fluid-cleaning system allows contractor to work where there is no water source

By Ken Wysocky

No water? No problem.

That's the simplest way to explain what prompted Brenford Environmental Systems, a municipal and industrial pipeline cleaner based in suburban Houston, Texas, to invest in an MCT450 fluid-cleaning system made by Mud Technology International Inc.

Brenford, which specializes in cleaning hard-to-access large-diameter sewer lines, often works in remote locations where fire hydrants or other water connections are about as rare as a leak-proof manhole. In other cases, water is technically accessible, but crews are hampered by water-use restrictions or other regulations in environmentally sensitive areas.

So how does a pipeline cleaning company work without water? That's where the MCT450, which the company purchased about four years ago, comes into play. The trailer-mounted unit pumps out graywater in the sewer line that's being cleaned, traps small debris with a series of filter screens and pumps the remaining graywater to a proprietary system called the Sewer Hog. That machine then uses a powerful water jetter and downhole pump to scour the pipe and remove debris.

Any small debris that's captured during this water-recycling process is typically taken to landfills for disposal; larger debris is removed by the Sewer Hog system and discharged into a watertight closed-loop, debris-containment system, where it's later removed from the job site for proper disposal.

"This machine is ideal for areas with no water supply," says Jimmy Stewart, Brenford's vice president of sales. And if sewer flow volume is too low to support MCT450 operation, crews can either create a dam (inside the pipe) or use a flow-through plug that stops enough water to operate the recycling system.

"We also can take water from lakes and ponds, remove any debris that can clog the jetter nozzles, then use the recycled water to clean large-diameter pipes," Stewart says.

The MCT450's maximum capacity is 450 gpm. The unit measures 23 feet long, just more

than 8 feet wide and 11 1/2 feet tall and weighs 20,140 pounds. Features include a 2,400-gallon tank, split equally for clean and dirty volume; submersed jet guns in each tank to stir contents; 36 square feet of filtering screens; 25 hp and 30 hp electric centrifugal pumps; easy-open clean-out valves; and remote-control operation.

money machines

- OWNER:** Brenford Environmental Systems, Pearland, Texas
- EQUIPMENT:** MCT450 fluid-cleaning system from Mud Technology International Inc.
- FUNCTION:** Uses a series of filters to recycle graywater from sewer lines, then pump it to water jetters for pipeline cleaning operations.
- FEATURES:** Maximum operating capacity of 450 gpm; 2,400-gallon tank; submersed jet guns to stir tank contents; 36 square feet of filtering screens.
- COST:** About \$138,000



The MCT450 fluid cleaning system from Mud Technology International pumps out graywater in the sewer line that's being cleaned, traps small debris with a series of filter screens and pumps the remaining graywater to a proprietary system called the Sewer Hog.

A recent job in Conroe, Texas, vividly illustrates the MCT450's value. Brenford won a bid to clean out about 10,000 feet of a remote, failing 72-inch-diameter sewer line that had to be repaired to make way for a residential subdivision. The section of the sewer was 3 or 4 miles from a paved road, and no water was available to jet the lines. But the MCT450 resolved that issue, Stewart says.

"We pulled water from the active sewer system, recycled it and pumped it to our Sewer Hog to clean the line," he explains.

The unit provides Brenford with a distinct competitive advantage because it can perform cleaning jobs that other companies can't. Moreover,

"Recycling water usually is much less expensive than hauling water and it allows for continuous operation. It helps make us a more appealing option."

Jimmy Stewart

it allows customers to sidestep the expense and hassle of having to either truck in water or use booster pumps and long hose runs to obtain water, he explains.

"Recycling water usually is much less expensive than hauling water and it allows for continuous operation," he says. "It helps make us a more appealing option. Plus, it's a 100 percent 'green' solution to an ever growing concern for municipalities. Water is a valuable resource that should be respected and reused when possible."

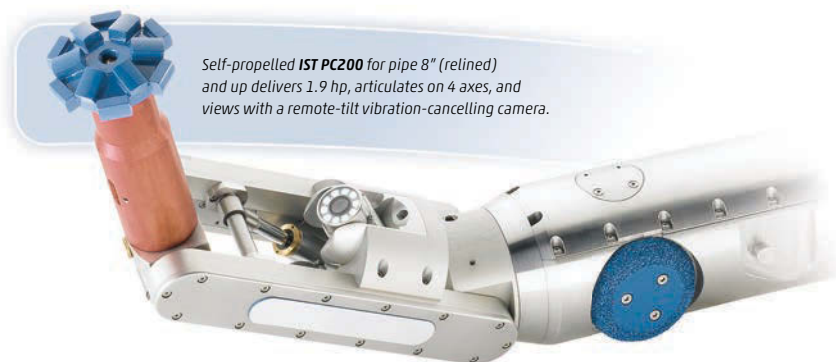
Stewart says company officials first learned about the MCT450 at a trade show. It seemed like a perfect solution for upcoming projects in which water access was an issue. He also lauds the unit's ease of operation, which requires just one person.

"We bought it for those projects and have been using it extensively ever since then," Stewart says. "It's more than paid for itself ... I'd say we have it working about 100 days a year.

"It's a great tool," he adds. "I'd say that out of all the projects where we use the unit, about half would be impossible to do without it. And they also tend to be higher-profit-margin jobs because of the degree of difficulty." **c**

SHOW US THE MONEY (MACHINE)

Money Machines, a feature in *Cleaner*, reports on innovative work vehicles that help contractors operate more efficiently, satisfy customers and earn more profit. We'd like to know about your Money Machine — be it a service van, camera truck, jetting rig, vacuum unit or any vehicle that really helps drive your business. To nominate your vehicle for a feature in this column, send an email to editor@cleaner.com. Tell us briefly but specifically what features make it a great producer. And send a picture — because appearance counts. We look forward to seeing your Money Machine.



Self-propelled **IST PC200** for pipe 8" (relined) and up delivers 1.9 hp, articulates on 4 axes, and views with a remote-tilt vibration-cancelling camera.

Cut ahead.

Deliver more and earn more with PRT's full range of top-performing cutters.

Robotic cutters from PRT redefine what's possible when cutting in drains, prepping for relining, and reinstating laterals. Exceed expectations—choose PRT for the agility and power to cut ahead.



Positioned with remote air bladders, **IMS Micro** travels 100' into laterals 3-6", maneuvers past elbows, articulates on 2 axes, and views with an illuminated camera.

Rental program.

Any cutter can be rented for trial purposes, or for a specific job.

Pipeline Renewal
TECHNOLOGIES™

www.pipelinert.com
(973) 252-6700

© 2013 Pipeline Renewal Technologies. All rights reserved. PRT name and logo are trademarks of Pipeline Renewal Technologies.

Introducing the vCam-5 Inspection Cameras

The vCam-5 Camera Systems have all the features that you liked in the previous models, with the addition of some great new features. The vCam-5 components are also backwards compatible with the previous vCamDigital and vCamModular systems.



Control Module

- WiFi and RJ45 computer interfaces
- One touch recording and still images
- Small profile, light weight and durable
- AC/DC powered with Li-ion rechargeable batteries
- Video streaming to Laptops and Smartphone's

Reel Coilers

- Mini and Standard sizes
- 512/640Hz locatable Sonde
- All stainless steel construction
- Heavy duty termination springs
- Narrow profile for easy deployment

Camera Heads

- Ultra bright LED's
- Modular repairable resin
- All stainless steel construction
- Full color auto upright cameras
- Auto iris adjust lighting automatically



Call us for your no obligation on-site demonstration!

Vivax-Metrotech Corporation

3251 Olcott Street, Santa Clara, CA 95054, USA

Toll Free: 800-446-3392

Email: sales@vxmt.com

Fax: +1-408-734-1415

www.vivax-metrotech.com

T&T TOOLS

T&T Tools, Inc.

Fax: 800.521.3260

Email: sales@tandttools.com

800.521.6893
www.MightyProbe.com



HOOKS...

- > Several different styles of heat-treated hooks are available
- > Top Poppers are great to open manhole covers
- > The Handy Hooks allow two handed use



PROBES...

- > Insulated, standard, and specialty soil probes
- > Metal shaft sizes: 3/8" round, 3/8" hex, or 7/16" hex
- > Replaceable tips are threaded on and hardened
- > A "slide" allows the handle to pound the shaft into the ground

HIS JOB

HIS LIFE



Protect them both.

High-pressure water can't tell the difference between steel and skin.

So suit up with protective gear from TST at any pressure. It only takes a few minutes to prevent serious, even life-threatening injury. There's just no good excuse not to suit up — every time.



800-231-8192
waterblast.com



800-822-8785
fssolutionsgroup.com



Progressive Effects

Several seemingly minor factors can stack up and lead to serious accidents

By Doug Day

A pilot inexperienced with the plane, an airport's glidescope out of service, problems with the automatic throttle, possible lack of proper supervision; take away any one of those suspected contributing factors and Asiana Flight 214 may not have crashed while landing at San Francisco International Airport in July. While still under investigation, the crash illustrates how accidents often have several causes, some possibly minor, that line up in just the right way to result in disaster.

The pilot in control of Flight 214 was a skilled veteran, but undergoing his "initial operating experience" training on the Boeing 777. It was the first time his instructor had filled the trainer role. The glidescope wasn't necessary due to the perfect weather during the landing, but would have shown they were too low. It's possible the pilots assumed the autothrottle was maintaining the proper speed, which it wasn't. The plane crashed just short of the runway, which wouldn't have happened if someone in the cockpit had recognized they were going too low and too slow.

Looking at the most frequently cited OSHA violations for fiscal 2012 (Oct. 1, 2011 to Sept. 30, 2012), one can see how a few things that happen together could lead to a serious safety event on the job site.

1. Fall protection, construction (29 CFR 1926.501)
2. Hazard communication standard, general industry (29 CFR 1910.1200)
3. Scaffolding, general requirements, construction (29 CFR 1926.451)
4. Respiratory protection, general industry (29 CFR 1910.134)
5. Control of hazardous energy (lockout/tagout), general industry (29 CFR 1910.147)
6. Powered industrial trucks, general industry (29 CFR 1910.178)
7. Electrical, wiring methods, components and equipment, general industry (29 CFR 1910.305)
8. Ladders, construction (29 CFR 1926.1053)

9. Machines, general requirements, general industry (29 CFR 1910.212)
10. Electrical systems design, general requirements, general industry (29 CFR 1910.303)

Without proper fall protection, a simple slip of the foot could result in death. OSHA reported 4,609 total worker deaths in 2011 – nearly 90 weekly – almost 13 every single day. It's no coincidence that the most cited violation was also the most common cause of the 4,188 deaths in the construction business in calendar year 2011, accounting for 35 percent of deaths in that industry, or that the first seven deaths of 2013 were all related to falls – all within the first five days of the year, including four in one day:

- Jan. 2 – fall from a ladder.
- Jan. 3 – 10-foot fall through a floor of home under construction.
- Jan. 4 – 80-foot fall from a cellular tower.
- Jan. 4 – 20-foot fall down steps.
- Jan. 4 – 30-foot fall from equipment.
- Jan. 4 – 8-foot fall from a drilling machine when it hit rebar.
- Jan. 5 – 30-foot fall while doing maintenance work on a crane.

The rest of what OSHA calls the Fatal Four for construction workers were:

- Electrocutions – 69 (9 percent)
- Struck by object – 73 (10 percent)
- Caught in/between – 18 (2 percent)

Eliminating those four, OSHA says, would save 419 lives a year – more than one life every day.

Have you looked at your most common safety violations? Do you regularly inspect the job site or monitor worker performance? Do you investigate close calls that could have resulted in injury or death?

Eventually, such "near misses" will result in a recordable injury. According to OSHA, for every 600 recordable injuries, there will be about 30 "life-changing" injuries. And for every 30 life-changing injuries, there will be one fatality. So the more minor incidents you can prevent, the less likely one of your co-workers, or you, will lose their life on the job. **c**

What's
Your
MONEY
Machine?

Do you have a go-to service vehicle or high-tech workhorse tool that conquers many jobsite challenges?

Let us know about it at editor@cleaner.com and we'll consider highlighting your most valuable performer in our Money Machines feature.

Cleaner

Featured in Cleaner?

Make the most of it!

We offer reprints:

posters, laser prints & electronic pdfs

Visit <https://www.cleaner.com/order/reprint/21550> for articles and pricing

Your Choice is
as Clear as *our*
Picture Quality.™



Quality Inspection Tools since 1957.

Mainline | Drainline | Lateral Launch | Laser Profilers | PANORAMO 360° Pipeline and Manhole

IBAK has been working for over 50 years to make your job safer and give you less headaches at the end of the day. Our pipeline inspection equipment is *not* the cheapest equipment you can buy, but we will guarantee you it is the highest quality, most reliable investment you can make. We have the industry's largest research and development team with over 15% of IBAK devoted entirely to new product development. Adherence to core principles of quality and technological innovation have driven IBAK to remain the industry leader since we invented sewer cameras in 1957. Call us or visit www.rapidview.com to find a dealer near you!



(800)-656-4225
www.rapidview.com

PROFILE

NCM

HYDRO VAC

613-933-3333

www.NCMhydrovac.com

THE BIG FIX

BY MARIAN BOND
PHOTOGRAPHY BY JAMES PARK

Kris Norris, owner and CEO of NCM Hydro Vac in Stittsville, Ontario, stands in front of his vac truck.

ENTREPRENEURIAL
SPIRIT AND EQUIPMENT
KNOWLEDGE GUIDE A
STARTUP CONTRACTOR
AS HE JUMPS INTO
MUDDY FRAY

With a five-generation pedigree of entrepreneurship, Kris Norris was destined to run his own company. So after working three years for his brother's construction firm, where he oversaw hydroexcavation work, he began looking for his own niche in the industry.

"I thought this would be the way for me to go on my own," he says. "With my truck, I could work for my brother providing [hydroexcavation] and acquire my own clientele as well."

Norris opened NCM Hydro Vac Services, with a clear understanding that he had his work cut out for him in metropolitan Ottawa.

With the help of financial backers, he purchased a 2006 Vactor combination unit that was set up for sewer work and hydroexcavation. Its cold-water packet (water boiler) made it possible to dig in Canada year round. With his father, Dana Norris, as his first employee, the duo solicited business by pounding the pavement and talking to anyone and everyone. They also put a full wrap on their truck so it looked like a rolling billboard.

While working for his brother, Norris says he noticed some contractors equipped their trucks with only one type of nozzle and some companies were more productive than others.

"Two different companies working on various sites for us would provide very different production results," he says. "I was observing and reaching my own judgment call as to their procedures. I was responsible for paying the bills for the carpentry operation. If my division was doing poorly with a large bill at the end of the day it reflected on me. I wanted to make money for the company. When I saw these disparities in the processes, I was always asking 'why?' I wanted the best bang for the buck as a consumer. I asked myself, if I were a business owner what would I be looking for in a hydrovac company?"

RENDER BY REMOTE

When Norris began the daunting task of promoting his newly formed company, he faced established competitors with multiple trucks. Prospective



NCM Hydro Vac Owner and CEO Kris Norris excavates post holes for a sound barrier fence. Water, gas and fiber optic lines were all present.

profile

NCM HYDRO VAC SERVICES

OWNER: Kris Norris

OPENED: September 2012

CUSTOMER BASE: Municipalities, commercial, general contractors

SERVICE AREA: Ottawa and surrounding communities

SERVICES: Hydroexcavation; cleaning storm drains, catch basins and sewer lines

EMPLOYEES: 4, including Norris

customers were skeptical and often told him to come back when he had a second or third unit, which became an essential goal. But in the meantime, he had to press on, so he worked with municipalities and contractors.

"In Canada, we are often required to operate 100 to 500 feet away from the truck while running water lines to cut the soil," Norris says.

He was able to establish himself as a specialized remote-hole excavation company.

"People would call, saying they had heard we specialized in remote hole digging," he says. "It is pretty physical, and some competitors are not going after that excavation. We began to take off in Ottawa. I know what nozzles to



Kris Norris and Chad Delle Palme excavate post holes in a residential yard with buried utilities.

WATCH THEM IN ACTION

To learn more about NCM Hydro Vac Services, view the video at www.cleaner.com.

run for water. I know the proper pressures for vacuuming. I began to vacuum up to 400 feet away with the Vactor 2100. I knew how to use 3800 cfm on the blower side and 2500 psi water cutting pressures.”

From the start, Norris was committed to success. He was fortunate to secure work within the fiber-optics community, as well as municipal work cleaning catch basins and culverts and flushing storm and sewer lines. In Ottawa, many of the old steel culverts are starting to rust and

“We began to take off in Ottawa. I know what nozzles to run for water. I know the proper pressures for vacuuming. I began to vacuum up to 400 feet away with the Vactor 2100. I knew how to use 3800 cfm on the blower side and 2500 psi water cutting pressures.”

Kris Norris

collapse. Large contractors provide relining, and NCM became involved with cleaning culverts, which can run from 40 to 500 feet long, in preparation for the relining.

Operating the business with one truck became a greater issue as more opportunities arose.

Norris began searching for the next piece of equipment for NCM Hydro Vac Services. After a lot of research plus a trip to the 2013 Pumper & Cleaner

Environmental Expo International, he found the unit that would set him apart from the competition and make him a leader in the Ottawa region. The Super Products LLC Mud Dog 1600 was the answer. Norris claims it’s the largest and most efficient truck in his region.

“I had done my research and talked with people who had this truck,” he says. “I believed this truck to be powerful, and that it would rip soil from the ground and pull it into the truck. Drier loads mean you will have more material in the debris tank instead of filling it with water.”

He was also looking for a specific type of blower.

“If the blower is not sucking air it won’t move material, and I liked the system on the unit,” he says.

Even with two trucks, Norris faces some daunting competition from companies with multiple trucks and a big footprint in the industry.

“People are beginning to notice my bigger truck and that we can show up and do more work without leaving the site,” he says. “Other units will have 10- or 12-yard debris boxes. These will have to leave the workplace more often to run to a disposal site, while we can stay on the job and make fewer trips. If someone is paying an hourly rate, we can offer the best production in the least amount of time.”

He adds that some of his competitors have up to 18 trucks.

“Here in Ottawa we don’t have a lot of dumps available to take slurry material, so the cost of trucking is an issue. Sometimes there will be a two-hour turn-around time. I wanted to bring a better value to the customer. With a 16-yard debris tank, we can be at a site and work all day and get twice the amount of work as our competitor. Another helpful feature is the ejection plate so you don’t have to spend so much time at the dump pushing out and rinsing a frozen load of mud.”



Kris Norris, Todd Delle Palme and Chad Delle Palme use a three-tip cutter nozzle to avoid damaging utilities while excavating postholes in a customer's yard.

POINT OF PRIDE

Kris Norris is a young entrepreneur with a spirit to get things done in a dramatic way. His vision for NCM Hydro Vac Services is to grow its services to contractors and municipalities by adding a truck each year and discovering wider applications for his equipment.

Because of his experience with hydroexcavation contractors, Norris is aware that unconventional methods are important when working in the harsh Canadian winters.

With his initial combination truck, Norris found the most challenging element was not in operating it, but knowing how far to push its power. He didn't want to exceed the truck's capabilities, nor underuse it. Now with two trucks, he is setting his own standards and discovering some unusual applications. Additionally he has become a "go-to guy" for remote hydroexcavation.

"The most rewarding thing for me on a day-to-day basis, being new in the business, is seeing the company that I'm slowly growing getting closer and closer toward my goals," he says.

Norris put his 2014 Super Products Mud Dog into service in late summer 2013. With the vehicle fully prepared for the road with matching wrap and logo, the dual rolling billboards caught the industry's attention.

The 2014 Super Products truck has a Peterbilt chassis, 16-cubic-yard debris tank and 1,500-gallon water tank. The blower generates vacuum power of 6,000 cfm at 28 inches of mercury. The pump (3,000 psi/18 gpm) is manufactured by Super Products. The 2006 Vactor is on an International chassis with a 12-cubic-yard debris tank, 1,300-gallon water tank and a Vactor blower with 3800 cfm at 17 inches of mercury. The pump (2500 psi/80 gpm) is by Vactor.

"In our area, we have different soil conditions, from sand to stone to assorted clays," Norris says. "When excavating soils you want to conserve your water by running the proper cutting head with the proper water pressure. When excavating in granular materials like sand or packed stone such as road base, the rotator nozzle works best. In sensitive areas made up of clays and not involving utilities, the one cutter nozzle works best. With utilities in play, the three-tip cutter nozzle works best. The rotator is also used for uncovering costly utilities such as hydro, gas and fiber optics."

GROWTH AND GRIT

After six months, Norris was able to hire a second operator.

Hiring the right person is always challenging. Norris has high work standards and expects his employees to understand hazards with the truck and know how to operate with high water pressure.

"I want my technicians to have a lot of drive, and a willingness to work hard. This is hard and demanding work. It is not for everyone, and we deal with unusual situations.

Kris Norris

"I want my technicians to have a lot of drive, and a willingness to work hard," he says. "This is hard and demanding work. It is not for everyone, and we deal with unusual situations.

"They tied a T-shirt to the end of the wire, and I put our hydrovac 500 feet down the street and sucked the wire all the way through the pipe. In a few minutes, it was done."

Kris Norris

"Municipal work can offer surprises, such as operating within train tunnels, sucking up liquids that can be contaminated – where there might be chemical spills – paint residue.

"We had a 100-foot vertical lift down to the train tunnel, and then were sucking up the liquid contaminants another 300 feet in the lateral line. We thought that was pretty amazing."

The Canadian weather is always a consideration, particularly when it comes to hydroexcavation because the ground can be frozen so deep.

"We had a situation where a waterline under a road had frozen down



The Norris family, from left, Carole, Dana, Kris and Andrew, in front of their Vactor 2100 combination unit (left) and their 2014 Super Products Mud Dog 1600. Kris is the owner and CEO of NCM Hydro Vac, but the whole family plays a role in the business.

11 feet deep, and a nearby subdivision was losing water. The contractor had to strip the asphalt off the road and we excavated a trench in the road down to the water main so we could use hot water to thaw the line and get the water flowing again."

Part of Norris's quick climb to success has been his ability to find creative solutions that expand his business.

"We have a roofing contractor who works with high-rise, flat-roof buildings," Norris says. "These typically will have a pea stone and tar roof. When they are in the process of reroofing, we offer a new option other than using a shovel and a bucket to collect debris that is then craned down and put in a truck for hauling. This is a long procedure that can take up to three days.

"Using our 2006 Vactor we run a disposable plastic hose down the side of the building to the truck and suck up all the debris on the roof into our truck and it is hauled for proper disposal. It's all one simple procedure. This can be done in six hours. We are presenting this option to other roofing companies."

While working for a telecommunications company that uses fish tape to push lines through an underground conduit, Norris stepped forward with a plan to move the lines that would reduce labor and time.

"I asked them, why not suck the wires through?" Norris says. "They tied a T-shirt to the end of the wire, and I put our hydrovac 500 feet down the street and sucked the wire all the way through the pipe. In a few minutes, it was done. I had successfully sucked the wire all through the pipe."

Norris says that when he comes up with these unusual methods, he often worries about looking foolish. However, he continues to explore ways to better serve his customers.

"One of the most satisfying things for me is when we have a large job, with my trucks in full view of everyone, and I know the publicity this provides me," Norris says. "And I know I am the one doing it and will complete it." **C**

more info

Super Products LLC
800/837-9711
www.superproductsllc.com
(See ad page 10)

Vactor Manufacturing
800/627-3171
www.vactor.com

SAFETY FIRST!

12" Plastic Axial Blower

The ONLY 12" Plastic Blower With A Canister On The Market!

The polyethylene housing and canister assembly are designed to be light weight and super quiet. Made of corrosion, UV and chemical resistant polyethylene in "safety orange." The quick-connect clipping system allows attaching the canister to the input side for powerful extraction or output side for ventilation. Plus molded carrying handle and 25' of PVC coated vinyl and polyester ducting which stores within the storage canister.

FREE AIR 1842 cfm 28 lbs.	ONE 90° BEND 1004 cfm 1 hp	TWO 90° BENDS 933 cfm 110/220 V AC 50/60 Hz
----------------------------------------	-----------------------------------------	-------------------------------------------------------------

GasAlert Systems



The MicroClip gas detectors



The Quattro multi-gas detectors.



Call Toll-Free
1.800.325.3730
www.MilwaukeeRubber.com



Allan J. Coleman – Since 1905

Call us today! 773-728-2400

5725 North Ravenswood Avenue • Chicago, IL 60660 • info@allanjcoleman.com



StoneAge® Warthog® Nozzles



WD-1 1/4"
(8-36" lines)



WG-1"
(8-36" lines)



WH-1/2
& 3/4"
(6-18" lines)



WS-1/2"
(4-8" lines)



WT-3/8"
(3-6" lines)



WV-1/4"
(2-4" lines)

**CALL FOR
GENERAL
SPECIALS**

Special pricing
on all
General jettors,
cameras and
machines



Repair Center for: RIDGID SeeSnake, Gen-Eye, Radiodetection, Electric Eel, Vision Technology, Insight Vision & Spartan Cameras Fast Turnaround Time

UPGRADE your camera system to the GVISION. A Better System



JetSonde Carriers - P-Trap Cable Sonde Carriers



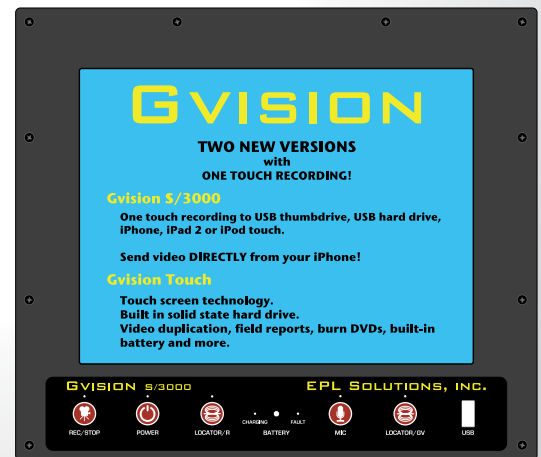
Ask what the
GPLAYER
can do for you?

Turn ANY push camera into a Jetter Camera
with the JetCam Adapter.

Jetter Hose

JetSonde Nozzle

JetCam Adapter



GVISION

TWO NEW VERSIONS
with
ONE TOUCH RECORDING!

GVision 5/3000

One touch recording to USB thumbdrive, USB hard drive, iPhone, iPad 2 or iPod touch.

Send video DIRECTLY from your iPhone!

GVision Touch

Touch screen technology.
Built in solid state hard drive.
Video duplication, field reports, burn DVDs, built-in battery and more.

GVISION G/3000

EPL SOLUTIONS, INC.



GVISION

Visit www.eplsolutions.net for more details.

OLDEST NAME IN THE BUSINESS
— Over 100 YEARS OLD — PHCC MEMBER

View and capture maximum details at every angle.

NEW!

Unparalleled imaging
Pans 360°, tilts 210°.

**Pan n' Tilt
Push Camera**

(Includes Reel and
Remote Control)



Optional
Steerable
Gooseneck



Trust the industry leader for consistent innovation.

For over 32 years now, Ratech Electronics has been at the forefront in the development, manufacturing and servicing of CCTV video pipeline inspection camera systems and equipment. Serving the municipal, industrial, and residential markets, our innovative products are created and manufactured with the quality and durability industry professionals demand.



Staying ahead of your customer's needs.



Record to
Cell Phone or iPad

Ultra Micro™
5/8", 3/4", 1" Available

Fast Peek™

Inspector PC²-xi

Locator

Jet Cam

Elite Jr.®



For more information on these or other products call
toll free: 1-800-461-9200 or 905-660-7072 or visit ratech-electronics.com

Ratech
ELECTRONICS

Video Pipeline Inspection Systems

Upload your inspection videos to **YouTube** Ask us HOW?

Twitter Follow us on Twitter @RatechCam

VSI Rentals, LLC.

51 Stone Road Lindenwold, NJ 08021
888-VAC-UNIT Fax: 856-627-3044



2008 Sterling truck mounted
combination vacuum and jetter units
3 Available
Price by Request



2008 Condor, dual steer truck mounted,
large capacity sweeper with dual sweep
gear and catch basin cleaner unit
Price by Request

**ALL UNITS AVAILABLE FOR
RENT OR PURCHASE
888-VAC-UNIT**



2008 International truck mounted,
industrial wet/dry vacuum loaders
with 27" Hg blowers
2 Available
Price by Request



2006 GMC (very low mileage) truck
mounted high pressure jetter unit with
TV inspection and vacuum system
Price by Request



Scan the QR
code with your
smartphone



WATERJET PROTECTION

PROTECTIVE CLOTHING - WITH THE STRONGEST FIBER IN THE WORLD!



+ PROTECTION UP TO 43500 PSI

+ CE CERTIFIED
VERIFIED PROTECTION

+ FAST AND EASY GEAR UP
TO MAXIMIZE PRODUCTIVITY!

+ RESISTS WATER AND DIRT
KEEPS OPERATORS
DRY AND LIGHT!

PROTECTION LEVEL 10/28
 SINGLE 1000 bar/15000 psi
 ROTOR 2800 bar/40000 psi
 CE 89/686/EEC

PROTECTION LEVEL 20/30
 SINGLE 2000 bar/30000 psi
 ROTOR 3000 bar/43500 psi
 CE 89/686/EEC



UNIQUE PROTECTION EQUIPMENT

For US distributors and e-catalogues, please visit:

WWW.TST-SWEDEN.COM

RUGGED & RELIABLE

Performance by Design

Made in USA

Ideal For Grease Trap Service



ELECTRIC POWERED

1939 **Conde'** 2014
75 Years
Vacuum Technology



GASOLINE POWERED

PRO-VAC
INDUSTRIAL PUMPOUT UNIT

www.westmoorltd.com

Westmoor Ltd., 906 West Hamilton Ave, Sherrill, NY 13461

TEL (800) 367-0972



There's a lot to see and do at the Pumper & Cleaner Environmental Expo. Using the online planning tools at pumpershow.com will help you get the most out of your time in Indy.

Let's Make It Great

Taking it all in at the Pumper & Cleaner Expo can be overwhelming. Here is some advice to ensure you make the most of your trip to the industry's best trade show.

By Briana Jones

Marking my fifth Pumper & Cleaner Environmental Expo International in February, I still remember my first show, walking into the vastness of the exhibit hall when I couldn't tell a vacuum truck from a portable restroom. (Don't worry, I figured it out pretty quickly.)

The Expo can feel overwhelming for first-time attendees, but the experience and knowledge gained are well worth the time and money spent.

I've been lucky enough to meet many of you because part of my job involves interviewing attendees, seminar leaders and exhibitors for videos. You've probably seen me with a camera guy wandering around the show floor. We're the video crew, and we create videos and post them on the Expo website (www.pumpershow.com), to our Facebook pages and on exhibitor websites.

And I've also learned a lot from you during my years at the Expo, which runs this year from Feb. 24-27 at the Indiana Convention Center in Indianapolis, Ind. Now it's my turn to pass along some helpful tips to make your show more enjoyable. Here's some advice for Expo goers, whether you're a seasoned pro or a first-time attendee:

PLAN OF ACTION

As North America's largest trade show for the environmental services industry – with 500,000 square feet of exhibits and new technology – using a virtual floor plan is a great way to ensure you see it all. The online tool – available on the Expo website – will help you plan each day so you don't miss anything.

Attendees check in and look over the exhibit floor map on the first day of the 2013 Pumper & Cleaner Environmental Expo.



The floor plan offers a quick and easy way to find exhibits and products. A graphic layout shows where each company is exhibiting and provides booth number, website, and phone number and address.

Look up companies and products with the "Search the Show" option in the upper left-hand corner of the floor plan page. For example, a search for "Pipeline

Rehabilitation/Lining” will highlight all the exhibits on the floor plan that have those products.

You can also create a show planner to save personal information, company and product information, and keep a schedule of educational seminars.

The mobile website on your smartphone is another helpful tool for planning your time at the Expo. You can search exhibitors to quickly find booth numbers, click the calendar icon to see educational seminar schedules and locations, or use the map of Indianapolis to find local restaurants.

Sign up for Facebook and Twitter updates on the mobile site to stay informed on everything happening at the show.

DAILY DOSE

Ensure you have the most current seminar schedules and company list with the complimentary Expo Daily, the official daily publication of the Pumper & Cleaner Expo.

The publication is available each day on stands at the main registration entrance, and includes daily events, news, features and photos from the show floor, seminar tracks, COLE Pub hours and lunch options in the hall.

Articles offer tips and tricks for how to make the most out of your time at the show, including nightlife options, Indy attractions and restaurant suggestions. Exhibitors also like to include specific times for product demonstrations and special offers in their booths.

Whether you're strolling the show floor or sitting down for lunch, introduce yourself to someone new. You're all there for the same reasons – to gain some knowledge, buy a new piece of equipment and network with your peers.

MEET AND GREET

The Expo is the best place to meet other contractors and municipal managers from across the nation and around the world who face similar industry issues. Whether you're strolling the show floor or sitting down for lunch, introduce yourself to someone new. You're all there for the same reasons – to gain some knowledge, buy a new piece of equipment and network with your peers.

If you're not the type to just walk up to someone and start a conversation, maybe now is the time to give it a try. What's the worst that could happen? You meet a new friend or colleague who helps you figure out how to make more money or expand your business.

The COLE Pub, located in the back of the hall next to the main concession area, is another great place to build your professional network. Open Monday from 11 a.m. to 2 p.m., and Tuesday and Wednesday from 11 a.m. to 4:30 p.m. during the Expo, the COLE Pub is a fun way to relax, have a drink and make a new acquaintance.

As part of the video crew, I interview attendees, which usually involves randomly walking up to some of you. I've learned a lot from having candid conversations about why you enjoy the Expo. I've heard so many words of appreciation from attendees for the COLE staff and the overall show, and I can't thank you all enough for making the show a great and informative experience.

We couldn't do it without you. If you have suggestions or questions for me or any of the editors, stop by and see us at the editors' booth located between registration and the main exhibit hall entrance. See you in February! **c**

Laboratory Tested Safe LiquiSmoke®

A smoke producing system that is so unique and cost efficient, it is covered by two United States Patents!

HURCO provides all you need to manage a complete smoke testing program better and more profitably.



Power Smoker™
with LiquiSmoke®



HURCO
TECHNOLOGIES, INC.®

1-800-888-1436
www.gethurco.com

(Patents: 6,865,341, 7,050,709)

YOUR SOURCE FOR RIDGID

CENTRAL OKLAHOMA
Winnelson
COMPANY

8% ONE YEAR FINANCING AVAILABLE!
Longer lease rates also available. Call Keith for details.

BUYING A SEESNAKE?

**CALL US FOR
GREAT PRICING &
FREE SHIPPING!**

**WE
WILL NOT BE
UNDERSOLD**

- Call Us Evenings and Weekends -

Keith: 405-602-9155 &

Jim: 405-205-3974



micro CA-100
Inspection Camera



CS10
Digital
Recording
Monitor
with Flash Drive



LT1000 Laptop
Interface System



microDrain Reel



DVDPak



SeeSnake® MAX rM200
Camera System

CALL TOLL FREE: 888-947-8761

5037 NW 10th
Oklahoma City, OK 73127

www.centralwinnelson.com



"water as a tool"

WOMA
CORPORATION

WOMA High Pressure Systems

help solve almost any Industrial cleaning, maintenance and decontamination problem.

- HIGH PRESSURE PUMPS TO 40,000 PSI
- 25-600 HP HIGH PRESSURE UNITS
- ACCESSORIES TO MEET ANY APPLICATION

Let us help you more effectively use "water as a tool."

When quality, performance and reliability matter...
PHONE: 800-258-5530 . FAX: 732-417-0015

KEN-WAY Beats the Others DAY-IN • DAY-OUT

And they have for over 50 years

KEN-WAY CABLE CLEANERS

for cleaning sewer, drain or process lines
from one to ten inches, up to 75 feet
with the Junior and up to
a full length of 300 feet
with the Model 400



KEN-WAY Exclusive Built Cables

3/8" 13/32" 1/2" 3/4" 11/16" 5/8" 5/16" 1/4"

- Heat Treated
- Inner-Core or Non-Core
- Fit Most Other Brands
- Interchangeable with Most Brands
- Coupling or Blade Holding Types

KEN-WAY
CORPORATION

Leasing plans available. Call for details.

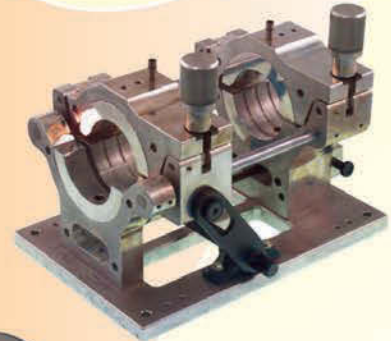
1-800-533-0551

930 ROBERTS ROAD, SPARTA, WI 54656
www.ken-way.com • E-mail: info@ken-way.com

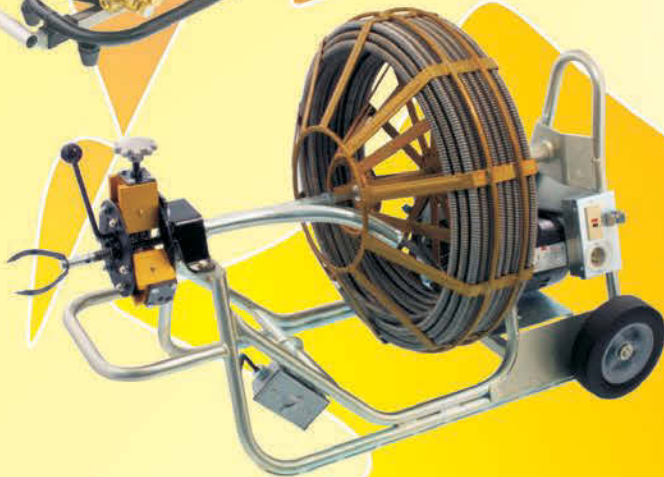


GORLITZ SEWER & DRAIN INC.

Norwalk Blvd. Santa Fe Springs, Ca. 90670



- MACHINES**
- FEEDERS**
- CABLES**
- RAMPS**
- CONNECTORS**
- LEADERS**
- CHUCKS**
- ENDS**
- RETRIEVERS**
- SPLICES**
- AUGERS**
- JETTERS**
- NOZZLES**
- HOSES**
- TRENCHLESS PIPE SYSTEMS**
- SOCKET FUSION KITS**



Engineering, Dedication, Quality, Sales and Service All In One Stop!

www.gorlitz.com
Email: sales@gorlitz.com
f GORLITZ on Facebook



Tel: (562) 944-3060
Fax: (562) 944-7630

Focus on Your Strengths

Learn to find and leverage what's right in your workplace with Appreciative Inquiry

By Chris Walling

Ever had more work than you had time? Ever felt that with ever decreasing budgets and no ability to hire new help that the demands of your organization exceed its capabilities?

How to solve the common challenges that organizations face is of course to logically focus on the things that aren't working in your organization, and try to figure out how to fix them. The conventional problem solving tools of deductive reasoning have continued to produce similar outcomes from one business to the next. What we focus on, however, we often create more of – meaning that if we are only able to see what's broken in our workplace, we may never find what's working. This is where a technique in organizational development called Appreciate Inquiry may come to your aide.

Appreciative Inquiry (AI) is a model of organizational development that asks leaders to shift to a positive perspective by examining the things that an organization does well and thereby leveraging its innate strengths to outweigh

The principles of Appreciative Inquiry are based on the idea that when you build upon your strengths rather than focusing upon your weaknesses, you create empowered solutions that become like a happy virus infecting all those around you.

its limitations whether they be budgetary or otherwise. The AI approach was born out of the research of Case Western Reserve University whereupon leaders recognize and value the contributions of things and people around them (appreciation), and then explore, discover and understand more about these possibilities (inquiry). This is done in what is called the Five D approach, which is as follows:

1. Define. You have to be able to define the scope of an appreciative inquiry's focus. So rather than making it "How do we continue to produce the same level of productivity with fewer staff?" it would be "How do we accelerate the productivity of our existing staff?" The phrasing of a focus is critical to what answers come in the subsequent steps of an appreciative inquiry. Remember, "seek and you shall find."

2. Discover. Identify the organizational processes that work well. This can be done by making daily rounds face to face with team members and organizational units to both establish rapport but namely to probe deeply into

what makes their jobs easier or to find what solutions they've developed to address some of their common challenges. Through the process of discovery you are able to not only have greater understanding with your employees, but also to identify potential issues before they become a problem. Through AI you empower your team members to have greater access to you as a leader, and they empower you to discover what works.

3. Dream. Envisioning the future can become what science often calls a "strange attractor." This is about the ability to clearly identify where you're going and share that vision with others routinely either through your repeat discovery procedures, or through organizational communications such as newsletters and emails. The dream step allows you to communicate a shared vision that others can be inspired to contribute toward, and invite them to dialogue.

4. Design. This is the inventory process by which you take note of all the planning and priorities that would work well in the future. Again, the key here is to continue to be solutions-focused and thus future-focused, and to allow the dream and visioning process to quickly roll over into asking yourself and others, "What might that look like?"

For example, let's say that Robert is a drain cleaner and he has told you he feels like he could be much more productive if he had a small jetter on his truck all the time, rather than having to share one with three other technicians. He's your most experienced jetter operator, and he says he could eliminate unnecessary travel time, complete more jobs per day and provide more efficient service to your customers. If you were to create a system in which Robert always had the jetter and other technicians communicated with him when one of their jobs required jetting, you would be able to increase productivity and take better advantage of Robert's skill set. This is process engineering 101, but with a positive twist. It's about focusing on Robert's successes and amplifying them.

5. Deliver. This is where the rubber meets the road and all that hard work of the previous steps comes together. This step is about the execution of the proposed design through shared governance and inclusion.

The principles of Appreciative Inquiry are based on the idea that when you build upon your strengths rather than focusing upon your weaknesses, you create empowered solutions that become like a happy virus infecting all those around you. Then suddenly, when people come knocking on your door with a problem, they know to come with some ideas and solutions in hand that can be easily implemented to leverage their own strengths toward greater success.

The key to implementation of appreciate inquiry is through communicating the AI philosophy to all members of the team. Many organizations have what is called an "Appreciative Inquiry Summit" where key stakeholders and leaders of

SPX



BOOTH
2242

NEW!
On-board
battery option

P340 FLEXIPROBE® SYSTEM.

CLASS LEADING FLEXIBILITY. SUPERIOR PICTURE QUALITY. OUTSTANDING VALUE.

The P340 flexiprobe® system delivers flexibility, advanced digital technology and outstanding picture quality.

- Weatherproof, rugged and cost effective portable inspection package, now with optional on-board battery
- Inspection capabilities from 1 1/4" to 9" with a built-in flexible sonde
- Compact Flash or USB flash drives for recording and data transfer
- Digitally pan, zoom and rotate live pictures and record in MPEG4 and JPEG
- Full titler with 20 pages of text and built-in reporting

To find out more call us on **800-688-8094**,
or email pearpoint.sales.us@spx.com
www.spx.com www.radiodetection.com



Pearpoint®

Copyright 2013 Radiodetection Ltd. – SPX Corporation.

an organization are brought together to dig deep into what's really right about their organization, and to ask themselves how they might be able to envision that growing larger and being more emphasized. In a small drain cleaning operation, you might sit down with your whole staff and discuss the company's strengths.

The old and outdated approach of identifying problems, analyzing causes and possible solutions, and then activating treatments based on those possible solutions is only a three dimensional approach. The Five D's, Define, Discover, Dream, Design and Deliver, are five dimensions of managerial problem solving that ensure that leaders are able to transform organizational challenges into amplifications of possibility. **c**

ABOUT THE AUTHOR

Chris Walling, MBA, is a speaker, consultant and former academic medical executive. For more information, visit www.chris-walling.com.

It's your magazine.
Tell your story.

Cleaner welcomes news about your drain and pipe cleaning/rehabilitation operation. Send your ideas to editor@cleaner.com or call 800-257-7222.



PRIMELINE PRODUCTS, INC.

"Your Prime Source for Solutions, Products, and Training"



Quik Shot Gun

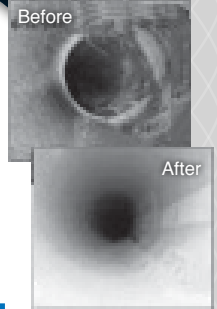


Quik Heater

Primeliner™ QuikShot

Fastest Lateral Lining Gun in the World!

- Installation Of Unlimited Liner Lengths
- Ambient Or Hot Water Cure With Quik Heater
- Financing Available



Before

After



Primeliner™ CIPP Sectional Lining Materials

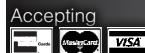
Save up to 75% off Kit Pricing!

- FiberGlass With Felt Scrim
- Epoxy Resins - Silicate Resins
- Carrier Packers

FREE Training from Experienced Personnel

24/7 Customer Support

Call Us Today!! 407.772.8131 or 877.409.7888



Visit our Website: www.primelineproducts.com
[Facebook.com/PrimeLineLining](https://www.facebook.com/PrimeLineLining)



You Tube See for yourself!! See our Youtube channel www.youtube.com keyword: PrimelineLining



Quality Used Trucks Available for Immediate Delivery



2014 Kenworth T370 Liquid Vacuum Truck ID #14148 Call for pricing

- 2014 Predator Vacuum System
- Mileage: 2,438 Hours: 59
- Fuller FRO 11210C 10 speed transmission
- 350 horsepower @ 2,000 RPM
- RFL 100 Wittig pump
- 3,000 gallon tank capacity



2003 International 2674 Guzzler DF Ace ID #69364 Call for pricing

- Cat C-10
- 370 horsepower
- Mileage: 141,935 Hours: 5517
- Cyclo blower pump
- 18 yard debris box
- Dense Phase Offload



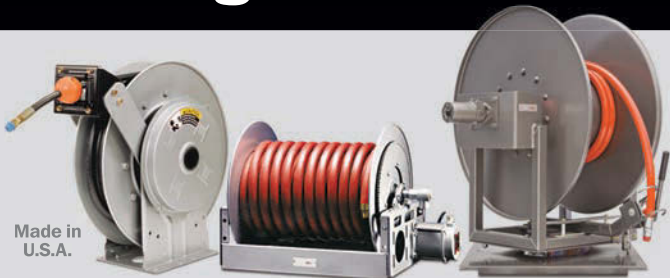
2006 International 7600 with New Guzzler CL ID #89543 Call for pricing

- Cummins 425 horsepower
- Mileage: 17,807 Hours: 874
- 18 yard debris box
- Hibon blower 28"
- Omsi transfer case

©2014 FS Solutions Group

Interested? Call John Stafford, FS Solutions Used Equipment Sales Manager (815)341-3512 or visit fssolutionsgroup.com for a complete listing of used equipment

Hannay Reels handle the toughest treatment.



Made in U.S.A.

You face severe conditions every day. We build custom reels that perform even in the harshest environments.

- Built to spec for washdown, jetting, pipeline inspection and more
- Heavy-duty design and construction
- Standard reels ship within a week

Let us solve your reel issues, so your crew can get back to business.



Find your reel solution: hannay.com or 877-467-3357



No Maintenance Or Oil!



Spinner™



Rentals Available

TIRED OF REBUILDING?
Let us solve your spinner problems with low maintenance and No Oil Solution.

Equipment Engineered for Long Lasting Performance™



CALL FOR A FREE DVD

NozzTeq®
Taking Science to the Sewer!
www.nozzteq.com
Toll Free 1.866.620.5915

predator or prey



WOLVERINE
CUTTING SYSTEM

Are your budgets getting eaten up due to long set-up times? Have you been a victim of low productivity due to poor cutter performance? Now you can attack the challenge of lateral reinstatement cutting with the Wolverine Cutting System.

Hunt down and reinstate your laterals rapidly and accurately with this self-propelled cutter. The Wolverine provides a feature-rich, powerful alternative to your current cutting equipment.

**Are you predator or prey when it comes to pipeline rehabilitation?
Call Aries today and start tracking your success.**



www.ariesindustries.com | (800) 234-7205

ARIES
INDUSTRIES, INC.

See what you're missing.

Location and Leak Detection, Drainline TV Inspection

By Craig Mandli

Depending on the situation, locating the source of inflow and infiltration in drainlines can be accomplished with either advanced acoustic electronics or mechanical methods such as smoke testing. The items below, including leak detectors and electronic line locators, transmitters, smoke locators and push TV cameras, will help solve issues and save time.

LEAK DETECTORS

PORTABLE GROUND MICROPHONE

The **Tmic** ground microphone from **Fluid Conservation Systems** allows technicians to hear sounds from a water distribution network otherwise inaudible to the human ear. The sensor tip can be connected magnetically to a listening rod or placed directly on the pipe or valve, transmitting the leak noise to the operator's headset via Bluetooth. Its onboard memory stores noise levels and displays the information on the LED display, allowing instant comparison between previous and current spot readings to identify points of interest. It is supplied with a range of listening rod extensions to suit different applications, and includes a built-in LED flashlight for operation in low light conditions. **800/531-5465; www.fluidconservation.com.**



Fluid Conservation Systems

LINE ASSESSMENT TOOL

The **Sewer Line Rapid Assessment Tool (SL-RAT)** from **InfoSense Inc.** is an acoustic inspection technology that can improve pipe inspection and condition assessment for collection systems. The device is used to make blockage assessments in 6- to 12-inch gravity-fed sanitary sewer lines in less than three minutes, with no flow contact or confined-space entry. The acoustic score for the segment ranges from 0 to 10 (0 – blocked, 10 – fully open pipe), and is typically used to help prioritize cleaning and CCTV inspection needs. **877/747-3245; www.infosenseinc.com.**



InfoSense Inc.

LEAK LOCATION SYSTEM

The **Leak Location System** from **Lansas Products** can systematically locate leaks in water or sewer lines. The system includes an air motor-driven hose reel (manual hose reel is optional) with 500 feet of color-coded triple-test hose and a three-way air swivel mounted on a heavy-duty welded frame. The manhole winch with footage counter indicates the precise location of leaks. Hydraulically actuated, heavy-duty manhole jacks will keep the triple test hose and winch cables from damage while in use. All the operator needs do is select the appropriate size pipe plugs required and begin testing. **800/452-4902; www.lansas.com.**



Lansas Products

SENSITIVE LEAK DETECTOR

The sensitive **LD30** leak detector from **MyTana Mfg. Company** features a six-band frequency selector that helps match its listening range to the leak. Originally developed for the nuclear power industry, the unit comes complete with two sensors, various probe rods and a convenient case to keep it protected when not in use. **800/328-8170; www.mytana.com.**



MyTana

CAMERA LOCATOR

The **8873** cable, pipe, camera and sonde locator from **Rycom Instruments Inc.** offers two versions of the dual active frequency packages – 512 Hz and 82 kHz or 512 Hz and 33 kHz – ensuring the ability to track any manufacturer's camera or sonde system operating on 512 Hz. They can be used to locate pinches and blocks in nonpressurized conduits and pipes, as sonde frequencies are matched to the frequency of the receiver. Sondes at all frequencies will trace through conduit up to 20 feet in the air or 10 feet in cast iron. The receiver pinpoints inspection cameras and sondes in nonmetallic conduits in a peak mode. A backlit digital display provides both relative and actual signal strength. A variable tone pitch gives an audio indication to the signal. The triple antennae configuration provides push-button depth accurate up to 15 feet and works in peak, pinpoint peak and null modes when used with a transmitter. **800/851-7347; www.rycominstruments.com.**



Rycom Instruments Inc.

DIGITAL WATER LEAK DETECTOR

The **LD-18** digital water leak detector from **SubSurface Locators** reduces ambient, intermittent noises from dogs barking, cars passing by, footsteps, and people talking. Its digital electronics sample the sounds every few thousandths of a second, and if it detects an intermittent sound, it suppresses it instantly. Water leak sounds are almost always continuous noises, and the unit can identify the continuous leak sounds even in difficult conditions, like busy streets. **775/298-2701; www.subsurfaceleak.com.**



SubSurface Locators

ELECTRONIC LINE LOCATORS

UTILITY LOCATING SYSTEM

The **UtiliGuard** utility locating system from **Ditch Witch** features ambient interference measurement (AIM) that automatically scans the surrounding area for noise and recommends the best frequency among its 70 options. It measures distances (depth) both horizontally and vertically to the utility to help users make more accurate locates of obstructed utilities. The system has a six-button, multilanguage operator interface and a high-contrast LCD display to ensure visibility in all conditions, including direct sunlight. A dual-output feature allows users to connect the transmitter to two utilities at once, and the system is Bluetooth-enabled to simplify data transfers. Its housing has an IP65 rating. **800/654-6481; www.ditchwitch.com.**



Ditch Witch

PIPE LOCATOR

The **Gen-Eye Hot Spot** pipe locator from **General Pipe Cleaners** features an easy-to-see auto backlit LCD display, with a Null icon that indicates the pipe location and Camera icon that confirms you're over the target. Rated at IP65, it's dust and dirt proof and water resistant. It has passed the 1-meter drop test while the screen passed the 18-inch steel ball drop test. Its total field antenna array allows operators to locate from any direction. Its line direction compass indicates the lay of the pipe. It features superior battery life, and locates two sonde frequencies, two power frequencies and four line frequencies. Operators can use the USB port to upgrade software in the field. **800/245-6200; www.drainbrain.com.**



General Pipe Cleaners

HIGH DYNAMIC RANGE LOCATOR

The **Easy Locator HDR** from **MALA GeoScience USA** features a single-frequency transducer that allows the detection and imaging of targets from small near-surface service connections to deeper larger-transmission facilities. Users can zoom in for visualization of small near-surface targets or out for maximum range to view the deepest targets. The detection limits span a broader range of various-size utility targets, particularly nonmetallic, nonconductive utilities such as plastic, asphalt composite, concrete, terracotta and more. Other features include a built-in DGPS receiver and upgradeable GPS Mapper software for mapping utilities marked digitally. The screen-capture function allows users to turn screen shots into JPGs to record and archive a location on the screen. A rough terrain cart (RTC) is available, as well as a portable foldable version outfitted for urban streetscapes. **843/852-5021; www.malags.com.**



MALA GeoScience USA

PIPE INSPECTION SOFTWARE

PipeLogix software from **PipeLogix Inc.** offers the power to cost-effectively collect data and accurately evaluate underground infrastructure assets. It is PACP certified, works with all CCTV systems and is backed by after-sales technical support. Data can be captured, analyzed and shared about mainlines, laterals, manholes, grout and inclinometer surveys. The program offers various reporting features. Built-in GIS tools enable the user to import accurate asset details from map programs directly into the pipe survey form; export shape files or feature classes in geodatabases from the program based on completed surveys, defect types, new assets found or pipe score values; and easily identify



PipeLogix Inc.

surveyed pipes on maps with color coding. A specially designed tool bar can be added to ESRI ArcMap to quickly filter survey data. Movies, reports or survey detail can be viewed within ArcMap. The program also interfaces with many popular industry standard asset management programs. **866/299-3150; www.pipelogix.com.**

FREQUENCY-SNIFFING LINE FINDER

The **LineFinder LF2200** from **Prototek** locates any frequency sonde or transmitter box between 16 Hz and 100 kHz using its frequency-sniffing feature. It features preset support of 16 Hz (steel or ductile iron as well as cast-iron and nonmetallic), 512 Hz (cast-iron or nonmetallic) and 8 kHz (nonmetallic only) sondes. It traces underground metallic lines at four built-in industry-standard frequencies using an external transmitter box; other frequencies can be sniffed as well. It passively locates underground power at 50 or 60 Hz. Its power frequency, as well as scaling in English or metric units, is user selectable. A series of LCD screens guides the operator through the steps to locate both sondes and lines with accurate position, as well as precise depth. Locating is enhanced by handle vibration and LED feedback at key locating points, in addition to on-screen imagery. It uses six off-the-shelf AA alkaline batteries. **800/541-9123; www.prototek.net.**



Prototek

UTILITY LINE LOCATOR

The **AML (All Materials Locator)** from **SubSurface Instruments** utilizes high-frequency radio waves to penetrate the ground and detect buried PVC pipes, septic lines, water mains, cables, wires and any other conductive or non-conductive material. It has three sensitivity settings for varying conditions, LED target indicators and a laser target indicator to pinpoint subsurface objects. It will function in clay, wet soil, snow and standing water without the need for a separate transmitter and receiver, wires or clamps. **855/422-6346; www.ssilocators.com.**



SubSurface Instruments

TRANSMITTERS

LOCATION SENSOR

Location sensors from **RICO GmbH** are available on all of the company's camera systems. They have a standard frequency of 32.768 kHz for time measurement, matching most commercial location systems, meaning the user doesn't need a specialized system. All camera systems feature the smallest useable diameter on pushrod cameras (2 inch) up to the biggest pipes with crawler cameras (800 inch) using the same frequency. **www.rico-gmbh.de.**



RICO GmbH

SMOKE LOCATORS

STEEL-BODY SMOKE TESTER

The **Power Smoker** from **Hurco Technologies** is designed to smoke test sewer lines quickly and cost-effectively. Using laboratory-tested safe LiquiSmoke and a SuperJet muffler, the system offers virtually a 100 percent burn of the LiquiSmoke. A solid cast-aluminum impeller provides durability and maximum air movement. Models are available to produce up to 8,761 cfm at 3.0 static pressure. It is made with steel for toughness, and a bright yellow ring for visibility when sitting in the street. It comes complete with full support, training materials and PSA kits. **800/888-1436; www.gethurco.com.**



Hurco Technologies

SMOKE FLUID SYSTEM

Superior Smoke Fluid Systems from Superior Signal Company are used to find faults and sources of surface water inflow in collection systems. The smoke fluid is both high quality and economically priced. All blowers are engineered for smoke testing. Systems use a double-insulated heating chamber with stainless steel injector to maximize dry smoke output. The system meets WEF and NASSCO standards, and is widely used in tests to meet EPA, ASHRAE, OSHA and NFPA standards. 800/945-8378; www.superiorsignal.com.



Superior Signal

MANHOLE SMOKE BLOWER

The Turbo-Fog MH-75 from Turbo Fog, a division of Kingscote Chemicals, is a self-contained smoke tester for easily identifying leaks, infiltration and cross connections in municipal collection lines. The smoke testing system uses leak-proof liquid aerosol smoke cartridges to create dense white smoke. No additional smoke bombs or garden sprayers are required. Made of 11-gauge powder-coated steel, the blower is capable of generating over 7,500 cfm to accurately test more pipe in less time. Briggs & Stratton and Honda engine models are available. 800/394-0678; www.turbo-fog.com.



Turbo Fog

PUSH TV CAMERA SYSTEMS

PORTABLE PIPE INSPECTION CAMERA

The Viztrac II pipe inspection camera from Amazing Machinery features 200 feet of durable 1/2-inch push cable with fiberglass rod inner core, a 20-inch cage reel and attached water-sealed case containing the controls, a high-resolution 7-inch LCD monitor and wheels to increase mobility. It also has a 1-inch powder-coated lay-flat frame with upright carry handle; a 1 3/8-inch O.D. metal camera housing; nine dimmable high-output 5 mm LED lights; high-resolution color camera; scratch-resistant sapphire glass lens; high-grade 512 Hz sonde locator with an average range of 12 to 15 feet; and an integrated digital video recorder with remote control, compatible with most standard SD cards. 800/504-7435; www.amazingmachinery.com.



Amazing Machinery

LIGHTWEIGHT PUSH CAMERA SYSTEM

The SEEKER system from Aries Industries is a user-friendly, contractor-grade examination tool for pipes from 3 to 24 inches in diameter and up to 300 feet in length. It can be operated as a stand-alone system or in conjunction with a CCTV truck to record all of the video to a PC or laptop. When used as a stand-alone unit, it is a self-contained system with no external wiring. Weighing as little as 40 pounds, it is easily transported to any job site and comes standard with a built-in 512 Hz transmitting beacon and bright 6.4-inch LCD screen. It offers either a self-leveling camera with either a ball skid or a roller skid, or a self-cleaning pan and tilt camera with wireless control. Options include digital video recording, on-screen footage, wireless video transmission up to 300 feet away, rechargeable battery, PAL video and live-line tracing. 800/234-7205; www.ariesindustries.com.



Aries Industries

GO-ANYWHERE INSPECTION SYSTEM

The P800 portable inspection system from Cobra Technologies has all the functionality of a truck-mounted system in a compact go-anywhere package.

The unit has full data collection capabilities, operates with any Cobra crawler and camera combination and is easy to maneuver with its collapsible heavy-duty handle. Its portable platform allows access to locations normally inaccessible to conventional equipment, or the system can be mounted on any range of vehicles, ATVs or trailers. It can provide 600 to 1,000 feet of cable, and is outfitted with a 10.4-inch sunlight-readable monitor. 800/443-3761; www.cobratec.com.



Cobra Technologies

PORTABLE LATERAL AND MINI-MAINLINE PUSH SYSTEM

The MPlus+ from CUES is a lateral and mini-mainline push system that enables easy operation with an all-in-one setup, but additionally offers flexibility by facilitating quick removal of the control unit to be used separately for off-road or remote job sites, or to accommodate compact storage. The system features video titling, video observation coding, digital recording and portability. This lightweight system includes large and durable wheels and a balanced footprint for stability. 800/327-7791; www.cuesinc.com.



CUES

ROTATION-HEAD PUSH CAMERA SYSTEM

The Valu-Pac IV push camera system from Cyclops Electronics Inc. features a rotation-head color camera that is able to inspect 6- to 24-inch lines with its built-in lights. It can be mounted on a heavy-duty transporter with forward/neutral/reverse capability and features powered rewind and auto-level wind to the reel plus keyboard data and on-screen footage to the controller. An auxiliary light controller increases its capabilities to 48-inch lines. The package includes 500 feet of TV cable, camera controller w/sound recording and light control, 15-inch LCD monitor and DVD recorder/player, 5- to 18-inch adjustable skid, 500-foot TV tow cable and mechanical footage counter. Options include large line wheel kits, weights and lift kit, increased traction wheels, a 150-foot pushrod and system analyzer. 830/249-9756; www.cycloptv.com.



Cyclops Electronics Inc.

PIPE INSPECTION CAMERA

The EasyCAM E3200 was designed from a plumber and drain cleaner's perspective, using easily replaceable modular components. When repairs are needed the owner can easily do them, as no special tools are needed. It includes a lightweight titanium color camera head for further distance, 200 feet of HYTREL abrasion-resistant pushrod with molded waterproof connectors, 512 Hz transmitter, onboard 8-inch daylight-readable monitor, powder-coated aircraft aluminum frame, RCA video jack for laptop or DVR use, safe 12-volt operation, heavy-duty wheels and a two-year warranty. 239/260-2056; www.easycamllc.com.



EasyCAM

PIPELINE INSPECTION SYSTEM

The Ecam ACE 2 pipeline inspection system from Electric Eel Mfg. features one-touch USB recording, an on-screen footage counter and a wheel kit. It also features a stainless steel-housed 1.68-inch color camera with sapphire lens, 20 LED light ring and high-resolution CCD element (with an optional self-leveling color camera



Electric Eel

available), 200 feet of Kevlar-braided 1/2-inch pushrod, a 512 Hz sonde, 5.4-inch LCD monitor encased in an anodized aluminum housing mounted to the reel, a protective acrylic antiglare monitor shield, a video output jack for recording option, flexible camera spring to navigate 3-inch P-traps, a secure-locking reel brake and a centering skid. **800/833-1212; www.electriceel.com.**

REMOTE PAN-AND-TILT PUSH CAMERA

The camera head of the **VeriSight Pro 360** from **Envirosight** remotely pans and tilts to give an operator maximum maneuverability when inspecting drainlines. A joystick on the control unit rotates it continuously and tilts it plus or minus 135 degrees. Versions are available with 130, 200 and 330 inches of push cable. Its digital interface displays real-time inspection footage on an 8-inch LCD, records up to 90 hours of inspection video to internal memory and allows an operator to enter observation data for upload to WinCan. A customizable interface lets operators zoom three times on live or recorded video, capture still images, configure the 16-page text writer, browse thumbnail galleries and select among several available languages. A tri-band sonde transmits at 33 kHz, 512 Hz or 640 Hz. The system runs off line or vehicle power, or an internal rechargeable battery. **866/936-8476; www.envirosight.com.**



Envirosight

LAY-FLAT-REEL CAMERA SYSTEM

The **FB-PIC3588A** camera system from **Forbest Products Co.** features a lay-flat reel. It comes with 150 feet of 3/8-inch fiberglass cable with a footage counter and stand. The high-resolution 7/8-inch waterproof metal color camera head (with optional 512 Hz sonde transmitter) is designed to inspect 1 1/2-inch or larger sewer and drainlines. The heavy-duty waterproof control box includes a bright 7-inch LCD color screen and a built-in SD card recorder with one-touch recording for photos and videos. The LED lights on the camera head are easily adjustable, and on-screen status indicators include footage counter and battery strength. The built-in rechargeable battery lasts about four hours. **650/757-4786; www.forbestusa.net.**



Forbest Products Co.

DAYLIGHT-READABLE MONITOR

The **Magnum DVR** command module from **Hathorn Corporation** features USB recording and a navigation menu that is simple to use and easy to learn. With its 10.4-inch daylight-readable monitor, images can be seen clearly in bright sunlight. The system features a full-size keyboard, 16 pages of text writing, 512 Hz sonde, on-screen footage counter, an 8X zoom, microphone, speaker and a two-hour built-in battery with smart charger. There are several different reel options available, along with three different camera head sizes. The command module can also be programmed to work with other manufacturers' reels. **905/886-2835; www.hathorncorp.com.**



Hathorn Corporation

LCD-DISPLAY CAMERA SYSTEM

The **Smart Display** camera system from **Insight Vision** features a 10.4-inch LCD screen. When sealed, the system is water, air and debris tight, making it ideal for use in harsh environments. The design of the case makes it mobile and lightweight to carry onto the work site. The self-leveling camera keeps images upright, and recording is easy using the external outputs and inputs. **800/488-8177; www.insightvisioncameras.com.**



Insight Vision

PUSHROD INSPECTION SYSTEM

The **P340+ Flexiprobe** pushrod video inspection range from **Pearpoint/SPX** features onboard lithium-ion battery power for convenient power for up to a full day's typical usage, enabling operators to work remotely. A push-button fuel gauge provides a quick indication of remaining power even when the controller is switched off. It features slots for USB flash drives and Compact Flash cards. And can also be connected directly to a PC to copy or move files without the need for a separate card reader. It offers a choice of two stainless steel high-resolution cameras. Users can zoom, pan and rotate images during recording and playback to focus in on problem areas. Still pictures can be taken at any time. **800/688-8094; www.radiodetection.com.**



Pearpoint/SPX

PORTABLE INSPECTION SYSTEM

The **GatorCam4** inspection system from **Radiodetection Corporation** offers the convenience of a portable system that can be used in most weather conditions. It boasts an onboard lithium-ion battery, and the push-button fuel gauge provides a quick indication of remaining power even when switched off. It can be configured to suit most inspection requirements. A range of pushrods is available, from an extra-flexible 100-foot plumbers reel, to navigate the bends and traps found in commercial and residential plumbing, up to the 500-foot extra-stiff rod designed to push for longer distances. **877/247-3797; www.radiodetection.com.**



Radiodetection

PAN, TILT AND ZOOM PUSH CAMERA

The **MiniLite System** from **RapidView IBAK North America** is a pipe inspection system that allows users to inspect, record and measure the internal dimensions of smaller pipelines. Users can accurately capture diameter measurements with one touch using the **ORION Zoom Camera** during normal inspection operations. The system consists of a cable coiler cartridge, which makes replacement easy, a portable command console and one of several choices of cameras. It includes a high-visibility 10.4-inch monitor and a full QWERTY keyboard. Inspections can be recorded on a built-in MPEG digital video recorder on SD and SDHC memory cards. The system is currently available in 100- and 130-foot lengths. **800/656-4225; www.rapidview.com.**



RapidView IBAK

WEB-ENABLED INSPECTION CAMERA

Pipeline inspection cameras from **Ratech Electronics** can record to Apple devices, including iPhones, iPads or iPods, allowing technicians to instantly upload pipe inspection video from the job site to YouTube. Using the integrated cellphone interface and camera, they can give customers immediate information about what is wrong with their sewer or pipes. Packages include quick and easy one-touch recording with no USB thumb drives, SD cards or DVDs. This interface is adaptable to any new or existing Ratech system. Also included is an on-screen display overlay system providing electronic distance counter, time and date. The camera has built-in 512 Hz sonde for locating purposes. The standard Gel-Rod cable length supplied is 200 feet, with longer lengths available. **800/461-9200; www.ratech-electronics.com.**



Ratech Electronics

AUTO-UPRIGHT PUSH TV CAMERA

The **minCam** push camera system from **Rausch Electronics USA** ships ready to use instantly, as there is no unpacking, no cables to be connected and no monitor to be mounted. The included color camera has auto-upright picture, integrated locator sonde and an application range of 3- to 16-inch-diameter pipe. Each system has 200 feet of standard fiberglass push cable, an integrated lithium-ion battery for up to two hours of operation, on-screen distance counter and an 8.4-inch sunlight-readable monitor. An SD card reader is built into the system to record up to 32 GB of video, images and audio. 717/709-1005; www.rauschusa.com.



DIGITAL RECORDING MONITOR

The handheld **SeeSnake CS6** digital recording monitor from **RIDGID** is equipped with SeeSnake HQ software, capturing still images and video clips and allowing users to quickly and easily edit, archive and deliver reports directly to customers through USB thumb drives or via print, DVD and online. Features include a 5.7-inch daylight-readable LCD screen, a water-resistant keypad, an on-screen keyboard for basic titling and text entry, and an integrated microphone and speakers. It can dock onto the SeeSnake Max rM200 camera system for transportation and storage, and is also compatible with the full line of SeeSnake reels. 800/769-7743; www.ridgid.com.



REMOTE PUSH CAMERA

The **RiFlexio S** push camera from **Ritec GmbH** can be pushed over deposits or staggered pipe joints, extending pipe inspections further. The camera head is remotely lifted upward and pushed over obstacles, and can turn in pipes 2 inches in diameter, making it ideal for tight work areas. The head can turn 90 degrees inside the pipe without losing its rotational capabilities. www.ritec-tv.de.



INSPECTION CAMERA

The **Sparvision 200** pipe inspection camera from **Spartan Tool** is self-contained in a single unit for easy on-the-job maneuverability. Outfitted with iPad technology, it is intuitive to use yet packed with features such as simplified emailing of recordings to your customers, a full on-screen QWERTY keyboard, and telestration, allowing you to actively draw on the screen to indicate problems. Its color self-leveling camera head simplifies diagnosis, and it features 200 feet of ultra-slick



pushrod and offers instant snapshots at any time. It comes with a standard 512 Hz locating beacon and pushrod distance counter. 800/435-3866; www.spartantool.com.

INSPECTION CAMERA SYSTEM

The **TVS-15** inspection camera system from **Trio-Vision USA** is designed for use in 6- to 60-inch pipelines. Typical applications include the inspection and investigation of sewerage and rainwater pipe. It features a modular design, interchangeable cameras, water resistance to IP68, a short-wheelbase crawler powered by two DC motors, integral circuit protection, a high-resolution CCD camera with 0.01 lux light sensitivity, an autofocus pan/tilt/zoom camera, and rearview camera and lighting. 707/793-0673; www.trio-vision.com.



MINI-CAMERA INSPECTION SYSTEM

The **ProCam DVR Ultra** from **UEMSI** is a compact and lightweight color mini-camera inspection system. It includes a 10.4-inch color LCD monitor and a built-in DVR that records video files and photos to an SD card. The push reel is made of powder-coated steel for durability and the nylon-jacketed push cable has a water-blocking gel inside to prevent water infiltration. The data display package includes on-screen digital footage and a full-size flexible keyboard. Options include an inline transmitter and rechargeable battery pack. 800/666-0766; www.uemsi.com.



VISUAL INSPECTION CAMERA

The **VIS 350** visual inspection camera from **Wohler USA** features a pan-and-tilt camera head to inspect wastewater lines, house connections, flue gas systems and ventilation lines. Locate the position of the camera head on a vibrant display and maintain your sense of orientation with the home function. Pinpoint damage with the integrated locator transmitter. It also comes equipped with two rechargeable batteries, giving operators greater mobility on the job. 978/750-9876; www.wohlerusa.com.



PORTABLE VIDEO INSPECTION SYSTEM

Portable video camera inspection systems from **Zistos Corporation** are battery operated and feature interchangeable camera options, including dual view thermal, black and white, a self-illuminated 10:1 color zoom and a variety of other self-illuminated options. Its tripod-mounted display isolates the operator, and telescoping fiberglass extension poles of various lengths are available. Its optional thermal imager sees temperature differences through smoke and in total darkness. It has optional image recording capability for documentation of findings, an ideal option to avoid confined-space entry. 631/434-1370; www.zistos.com. c



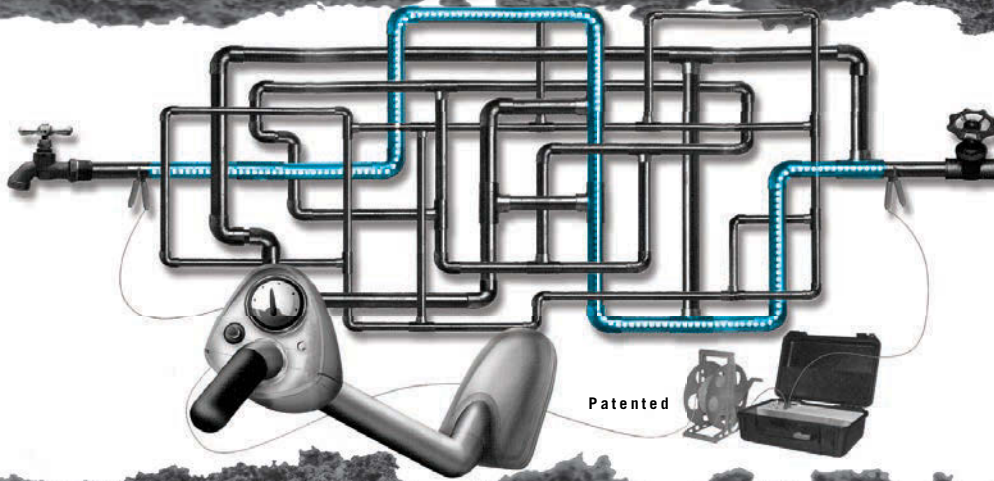
Cleaner
Cleaner
Cleaner
Cleaner
Cleaner

Socially Accepted

facebook.com/CleanerMag
twitter.com/CleanerMagazine
plus.google.com
youtube.com/CleanerMagazine

www.cleaner.com
classifieds, editor's blog, discussion forums and more!

Pulsar 2000 Line Tracer



**Locate Lines
Locate Water Leaks
Training Video**

It's a jumble out there.

www.Pulsar2000.com
DISTRIBUTORS WANTED



The Pulsar 2000 line tracer is designed primarily to locate metallic pipes. The Pulsar 2000 is a directional line tracer. Connect the Pulsar's powerful and unique transmitter to your target pipe and locate only that pipe. Locating can be accomplished under floors, in walls and in ceilings. The Pulsar 2000 does not require grounding.

Leak detection personnel... The Pulsar 2000 is a must have locator. Now you can quickly identify the pipe location, thereby reducing the search area of the leak.

100% satisfaction guarantee... We are so sure that you will see the time saving benefit of the Pulsar 2000, we will let you return it for a full refund if you are not satisfied. If

you want to learn more about the Pulsar 2000 and our leak locating equipment, please call 1-888-752-5463 or e-mail jsml@aol.com for a free demonstration video or CD and references of satisfied customers.

We have been using the Pulsar 2000 along with the XL2 fluid detector and Geophones since January 1989 in our leak locating business. Our leak locates are **accurate 95% of the time**, but I can honestly say, the line we trace is always there. Our equipment is user-friendly and requires very little training, as you will see on the video. Purchase the Pulsar 2000 line tracer, XL2 fluid detector and Geophones, and start locating leaks immediately.

**Featured In
An Article?** We provide
reprint options



Sizes: 24" x 30" & 36" x 45"

POSTERS
Starting At
\$35

**LASER
REPRINTS**
Starting At
\$10

**ELECTRONIC
REPRINTS**
Starting At
\$25

Planning with Vision

Order through our website

www.mswmag.com

This Is The Nozzle You've Been Waiting For

*Patented
Root Rat **root
cutter
nozzle**

1/2"



7-35 gpm/1500-10,000 psi

3/8"



3-10 gpm/2000-7500 psi

3/4-1"



40-160 gpm/1500-4000 psi

Custom Built Jetters



Hot or cold water jetters from 4 gpm at 4000 psi to 12 gpm at 4000 psi, skid or cart frames or small trailer systems.

Root Rat Combo Kit



"The Root Rat is the easiest and most versatile root cutter nozzle I have ever used. The Root Rat works where other nozzles fail."
Tim Jones, owner of Eastern Sewer Jetting



3/4" - 1" root rat combo kit. Use a reducer adapter to go from 1" to 3/4".

MADE IN THE USA

**WE SELL AND SERVICE
COLD WATER JETTERS**

We Sell PARTS, PUMPS,
UNLOADERS, HOSES, JET TIPS, ETC.

**CHEMPURE
PRODUCTS CORP.**

1-800-288-7873 • 330.874.4300

Visa, Mastercard, Discover, AmEx Accepted

www.chempure.com



8873 Locating System

SIMPLE, INEXPENSIVE & IDEAL for locating camera inspection systems, sondes and utilities. The 8873SD is an effective solution for sewer inspection and drain cleaning. Available with 512Hz, 640Hz & 33kHz sonde modes and 82kHz line locating mode, the 8873 is an effective solution for sewer inspection and drain cleaning.

800-851-7347
www.rycominstruments.com



HOME OF THE DOMINATOR® CUTTER



Dominator® Cutters

- » Generation II Infinite Controls
- » Streamlined Air Motors Ranging from .7 HP- 2.5 HP
- » Air & Drive Motor Rebuilds
- » Classic 615 & Jumbo 1236 Repair Parts & Service
- » Free Training at Our Facility on Our Products

BTCS MAGNUM DRIVE MOTORS

For Dominator® 4-30 Cutters



Patented Design for Superior Life & Performance.

LEADERS IN CUTTING TECHNOLOGY

717-432-1403 • www.bowmantool.com • bowmantoolco@earthlink.net

LAPLACE EQUIPMENT

RENTALS, SALES & SERVICE

- **WATERBLASTERS:**
PRESSURE TO 40K,
FLOW TO 100 GPM
- WATER JETTING TOOLS
- HYDRO-MOWERS
- 3D NOZZLES
- ROTATING NOZZLES
- HIGH PRESSURE HOSES
- LANCES
- FITTINGS
- TIPS
- SUPPLIES
- EXPERIENCED TEAM FOR PLANNING, TRAINING & SETUP



CALL
985.652.5210
FOR YOUR
WATERBLAST
PROJECT
SOLUTIONS
WWW.H2OBLAST.COM

SCOOTER

VIDEO
INSPECTION SYSTEMS

20843 Santa Lucia • Tehachapi, CA 93561 • Fax: 661.822.8917

"Simplify your life!"

SCOOTERS ARE EASY TO USE, TOUGH AND DEPENDABLE.
DON'T LEAVE THE SHOP WITHOUT ONE.

Merry Christmas &
Happy New Year



NEW!

13" LED
Hi-Def
Monitor



**SPECIAL
PACKAGE**

200' Color System, 512 Hz Transmitter,
20' Coil Cord, 2 Sets of Skids!

\$3,995

The new Scooter basic attaché now includes a 13" hi def led monitor built into a high quality, almost indestructible, Pelican case with a false floor that conceals a nice storage area for cables, cords, etc!

800.772.6165
www.tvinspection.com





2014 EXHIBITOR LIST

Current as of Dec. 9, 2013. Subject to change.

A. Rhodes & Associates, Inc.
A.R. North America
Abbott Rubber Company, Inc.
Accelerated Tanks and Trailers
Acra Trailer
Advance Pump & Equipment
Advanced Containment Systems Inc.
Advanced Drainage Systems
Advanced Pressure Systems L.P.
Advantage Funding
Aero-Tech
AK Industries Inc.
Alderon Industries, Inc.
All Star Sewer Equipment
Allan J. Coleman Co.
Allied Forward Motion LLC
Allied Graphics
Allied Tank Co.
Alpine Equipment Funding, Inc.
Alteris-SeptiCover
AltumaMATS, Inc.
Amazing Machinery, Inc.
Ameri-Can Engineering
American Express OPEN
Amthor International
Anua
AP/M Permaform
Aqua Mole Technologies
AquaOnDemand Solutions by Aqua-
Aerobic Systems, Inc.
AquaSales
AQUA-Zyme Disposal Systems, Inc.
Arcan Enterprises Inc.
Aries Industries Inc.
Arimitsu of North America, Inc.
Armal, Inc.
Art Co. LLC
Arthur Custom Tank / Mid-State Tank
Arthur Products
Ashland PolyTrap
Ashland Pump
Atlanta Rubber & Hydraulics Inc.
Avanti International
Bad Dog Tools
BakerCorp
Bandlock-Amesbury
Banjo Corp.
Barnett
BDP Industries
BeanPumps.com / FMC Technologies
Benjamin Franklin Franchising
Benlee, Inc.
Best Enterprises Inc.
Betts Industries
Biffs Pathfinders, LLC
Biodyne Midwest
Bio-Microbics Inc.
Black Tie Products
Blasters, Inc.
Blood Hound Underground
BODUS GmbH
Boerger LLC
Bowman Tool Co.
BOXR Hydro-Excavators
Brenlin Company, Inc.
Bright Dyes
Bright Technologies
Bulk Toilet Paper
BW Technologies by Honeywell
CallSource
Cam Spray

Canam Equipment Solutions, Inc.
Camplas LLC.
Cape Cod Biochemical Co.
Cat Pumps®
CEMTEC / A.W. Cook Cement Products
Century Business Solutions
Century Chemical Corporation
Champion Pump Company, Inc.
Chandler Equipment Inc. (CEI)
Chelsea Products/Div. of Parker
Chempace Corporation
Chempure Products Corp.
Cherne Industries Inc.
CIPP Services, LLC
CIPP Technology and Equipment LLC
Clarus Environmental/Zoeller Pump
Company
Clayton Industries
Clear Computing
Clearstream Wastewater Systems Inc.
Cloverleaf Tool Co.
Cobra Technologies
COLE Publishing
COLE Publishing Editors
Comet USA, Inc.
Comforts of Home
Conseqtec Universal
Consolidated Treatment Systems, Inc.
Containment Solutions, Inc.
COXREELS
Crescent Tank Manufacturing
Cretek Specialty Products
Crest Busters/Schmitz Bros.
CUES
Custom Biologicals, Inc.
De Neef Construction Chemicals
Del Vel Chemical Co.
Depth Ray
Ditch Witch
Dove Ventures Inc.
Downey Ridge Environmental Company
Dragon Products
Draincables Direct
Dultmeier Sales
Durracable Manufacturing
Dyna Flex Inc
DynaLiner LLC
Dynamic Filtration Limited
E Z Onsite
E.H. Wachs
Earthtek Environmental, LLC
Easy Liner
Eljen Corporation
Envirologics
Ecological Laboratories Inc.
Electric Eel Mfg. Co. Inc.
Eljen Corporation
Envirologics
Environment One Corporation
Environmental Tank & Container (ETC)
EnviroSight LLC
Enviro-Tech of America, Inc.
EnviroTub
Enzz USA Inc.
Enps Products
Enright Vision
E-Tank, Ltd./ E-Pump
EVPAR
EZTrakR
Farmhost Hosted Applications
Federal Signal Environmental Solutions
Group
Fisher Research Laboratory

Five Peaks
FXC Co. Ltd.
Flint Industries
Flo Trend Systems Inc.
FlowMark
FM Manufacturing Inc.
Forbest Products Co.
Forest River, Inc.
FORMADRAIN Inc.
Franklin Electric / Little Giant
Engineered Products
Fruitland Manufacturing
Gamajet, a part of the Alfa Laval Group
GapVax Inc.
Gardner Denver Water Jetting
Systems Inc.
Gardner Denver Wittig
GE Oil & Gas - Roots Blowers
GEA Farm Technologies, Inc. (Houle USA)
General Pipe Cleaners/General Wire
Sprung Inc.
General Pump
Geofflow, Inc.
GFG Instrumentation, Inc.
Giant Industries Inc.
Global Vacuum Systems, Inc.
Go For Digger
Godwin, a Xylem Brand
Goldak Inc.
Gorlitz Sewer & Drain, Inc.
Gorman-Rupp Co.
GPS North America
Grease Guardian
Green Leaf Inc.
H2 Technical Rescue Equipment
Hackney / Isuzu Trucks
Hadronex
Hamilton Kent
Hammelmann Corp.
HammerHead Trenchless Equipment
Hannay Reels Inc
Harben Inc.
Hathorn Corporation
HCP Pumps of America
Hedstrom Plastics
Helix Laboratories Inc.
Hibon, Inc./Div. of Ingersoll Rand
Hino Trucks
Hi-Vac Corporation
Hot Jet USA
Hurco Technologies Inc.
Hydra-Tech Pumps
I.S.T. Innovative Sewer Technologies LLC
Impact Technology
Imperial Industries Inc.
In The Round Dewatering
Infiltator Systems Inc.
InfoSense, Inc.
Infrastructure Repair Systems, Inc.
Infrastructure Technologies
Infrafrach
Innovative Equipment, LLC
InSight Mobile Data Inc.
Insight Vision
Integrated Vehicle Leasing
InterfitUSA
InvizIQ
ITJ Trailers & Truck Bodies Inc
IITJ Chemical Co.
J. Hvidved Larsen US
Jack Doheny Companies

JAG Mobile Solutions
Jameson LLC
Jason Industrial, Inc.
Jet Inc.
Jets Vacuum AS
Jetter Depot
Joe Johnson Equipment, Inc.
John Bean Jetters
Johnny's Choice by Chempcorp
KeeVac Industries Inc.
KEG Technologies, Inc.
Keith Huber Corp.
Kentucky Tank, Inc.
KM Specialty Pumps & Systems, Inc.
Kros International USA
Kroy Industries
Kuriyama of America, Inc.
La Place Equipment Co Inc.
Lasans Products
LE, Inc.
Lely Manufacturing
Lenzyme Incorporated
Liberty Financial Group, Inc.
Liberty Pumps
Linco-Precision, LLC
Liquid Environmental Solutions
Liquid Waste Industries
Liquid Waste Technology LLC
LMK Technologies, LLC
LMT, Inc. I VAXTEEL
LodarUSA
Logan Clutch Corporation
Logiball Inc.
Longhorn Tank & Trailer
Madewell Products Corporation
Mailhot Industries
Mainline Backflow Products, Inc.
Master Incorporated
Masterliner, Inc.
Material Motion, Inc.
LodanUSA
McKee Technologies
Merrill Bros., Inc.
Mid-State Tank Co., Inc.
Miller Pipeline
Millner-Haufen Tool Company
Milwaukee Rubber Products Inc.
Mody Pumps, Inc.
Moeller Plastics
Moey Mtg. & Sales
Money In Motion
Moro USA
Mr. Rootler Corp.
MTC
MTech
Muncie Power Products
Murphy by Enovation Controls
MyTana Mfg. Company Inc.
NASSCO, Inc.
National Environmental Health
Association
National Precast Concrete Association
National Vacuum Equipment
Nature Calls
NAWT - National Association of
Wastewater Technicians
Nexstar
NLB Corp.
Norweco Inc.
NovaFlex Hose
NozzTeq, Inc.

NSF International
No Flow
Oceanqup, LLC
Ohio Electric Control, Inc.
Omega Liquid Waste Solutions
OMI Industries
OMSI Transmissions, Inc.
One Biotechnology
Orenco Systems, Inc.
PA SpA
Parson Environmental Products Inc.
Patriot Pumps
Pat's Pump & Blower
PC Scale Technologies
Pearpoint / SPX
Peinemann Equipment
Pelican Worldwide
Penny Pockets
Pentair
People's United Equipment Finance Corp.
Perma-Liner Industries LLC.
Peterson Products
Petrofield Industries (Tornado Hydrovacs)
Phoenix USA Inc.
Piccadilly Concepts
Picote Oy Ltd
Pik Rite Inc.
Pipe Lining Supply, Inc.
PipeHunter
Pipeline Analytics
Pipeline Renewal Technologies
PipeLogic Inc.
PipeTech Software
Piranha Hose Products
PLE-USA
Plug-It Products
Point-of-Rental Systems
Poly-Flow
PolyJohn Enterprises Corp.
Polylok/Zabel
PolyPortables, LLC
Porta Pro Chemical Company
Portable Sanitation Association Int.
PortALogic - EleMech, Inc.
POSM Soft LLC
POSM Soft LLC
Power Selling Pros
Powertack International Inc.
Pow-R Mole
Premier Oilfield Equipment Co.
Premier Tech Aqua
Presby Environmental, Inc.
Pressure Lift Corporation
Presvac Systems, Ltd.
Prime Resins, Inc.
Prime Solution, Inc.
PrimeLine Products
Pro Stitch Inc.
Progress Tank
Pronal-USA, Inc.
Protective Liner Systems
PSI Pressure Systems Corp
Puck Custom Enterprises
PumpAlarm.com
PUMPTCE
Quadox / Interfit
Quik-Lining Systems, Inc.
RABCO Sales LLC
RapidView IBAK North America
Ratech Electronics, Ltd.
Rausch Electronics USA LLC
RC Industries Inc.

RecoverE
REED Manufacturing Company
Reelcraft Industries Inc.
Reline America Inc.
ReviewBuzz
Rich Specialty Trailers
RIDGID
RID-X® Septic System Treatment
Ring-O-Matic
Ritam Technologies, LLC
RITEC GmbH
Robinson Vacuum Tanks, Inc.
Robuschi & C.S.p.A.
RODDIE Inc.
Roebic Laboratories, Inc.
RootX
Roth Global Plastics
ROTHENBERGER USA
RotoSolutions
RouteOptix Inc.
RS Technical Services Inc.
Rugged Liner, Inc.
Rush Refuse Systems
Sabre Manufacturing
SAERTEX multiCom LP
Safety Corporation of America
Safety Sewer Drain
Salcor, Inc.
Sanitarios y Quimicos de Mexico
Satellite Industries Inc.
Saverreisen, Inc.
Savatech Corp.
Schieffler Co. International L.C.
Scorpion Protective Coatings
ScreenTech Imaging, a div. of Roeda
Signs Inc.
Sealing Systems Inc.
Sekisui SPR Americas, LLC
Sensors & Software Inc.
Septic Drainer/Municipal Sales, Inc.
Septic Maxx
Septic Products Inc.
Septic Services Inc.
SepticPages.com
Septronics
Service Roundtable
Set Solutions
Sewer Equipment Company of America
SewerPages.com
Shark Pressure Washers & Jetters
Sherwin Williams
ShuBee
SIM/TECH Filter Inc.
SJE-Rhombus
Slewmaster, Inc.
Slide-In Warehouse
SludgeHammer Group Limited
Solar LED Innovations, LLC
Source 1 Environmental
Southland Tool Mfg. Inc.
Spartan Tool LLC
Specialty B Sales
STAC, Inc.
Stamp Works
Standard Cement Materials, Inc.
Standard Equipment
Statewide Supply, Inc (Bio Clean)
Sto-Away Power Cranes Inc.
StoneAge, Inc.
Sturgeon Tank & Equipment
Stutsman

Subsurface Instruments
Sunbelt Rentals
Super Products LLC
SuperDri Corporation
Superior Signal Company LLC
Supervac 2000
Surco Portable Sanitation Products
Surpressure 4S Inc.
SVE Portable Roadway Systems, Inc.
T & T Tools, Inc.
Tank Track LLC
TCF Equipment Finance
Technology Services Company
Terydon Inc.
The Dale Company
The Soil Surgeon, Inc.
The Strong Company
Thieman Tailgates, Inc.
Thompson Pump
Topp Industries, Inc.
Trade-Serve
Trans Lease, Inc.
Transway Systems Inc.
Trelleborg Pipe Seals
Trenchless Solutions Inc.
Trenchless Technology Magazine
TRIC Tools Inc.
Trillium Industrial Services
Trio-Vision USA
TRY TEK Machine Works, Inc.
TSF Co. Inc.
TT Technologies Inc.
Tuf-Tite Inc.
Turbo-Fog, Division of Kingscote Chemicals
U.E.M.S.I.
Udor USA
Under Pressure Systems, Inc.
US Fleet Tracking
US Jetting, LLC
USA BlueBook
USB-Sewer Equipment Corporation
VAC2GO
Vaccall
Vac-Con Inc.
Vacutrux Limited
Vacuum Sales, Inc.
Vacuum Truck Rental
Vaporooter
VAR Co.
Vermeer
Veyance Technologies, Inc.
Vivax-Metrotech Corp.
Vogelsang
Vu-Rite Video Inspection Systems, LLC
Wallex Products Co.
Wallenstein Vacuum Pumps
Wastequip
WasteWater Education 501(c)3
Water Environment Federation
WC Leasing
Web App Express Ltd.
Weber Industries, Inc. (Webtrol)
Wee Engineer Inc.
Wells Cargo Ultralav Mobile Restrooms
Wells Fargo
Western Equipment Finance
Western Mule Cranes
Westmoor Ltd.
Wieser Concrete Products Inc
Wohler USA, Inc.,
Zhejiang Danau Industries Ltd.



REGISTER ONLINE AT WWW.PUMPERSHOW.COM OR BY CALLING 866-933-2653



EDUCATION DAY

MONDAY FEBRUARY 24, 2014

NASSCO NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES

- 8 a.m. Lessons Learned During Sewer Rehab on Public and Private Property
- 9:30 a.m. Pipe Bursting a Mature and Diverse Trenchless Technology
- 11 a.m. Resurgence of Chemical Grout Industry: Niche Business Opportunities
- 1:30 p.m. Chemical & Biological Control of F.O.G. in a 2,500-Mile Collection System
- 3 p.m. Lateral Rehabilitation, What's Available
- 4:30 p.m. Fiber Optic Temperature Sensing Technology for CIPP Cure Quality Control

NEHA NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION

- 8 a.m. DEER in the Headlights
- 9:30 a.m. Basic Chemistry of Onsite Wastewater Treatment Systems
- 11 a.m. Making the Most of Experience: Training and Credentials for Wastewater Pros
- 1:30 p.m. Winners Communicate
- 3 p.m. Best Available New Technology
- 4:30 p.m. Best Available New Technology: How to Get Your Regulators on Board

NPCA NATIONAL PRECAST CONCRETE ASSOCIATION

- 3 p.m. 7 Things About Design, Installation & Maintenance of Precast Concrete Tanks
- 4:30 p.m. Grease Interceptors: A Slick Solution to a Greasy Problem

WJTA-IMCA WATERJET TECHNOLOGY ASSOCIATION INDUSTRIAL & MUNICIPAL CLEANING ASSOC.

- 8 a.m. Preparing for your First High Pressure Waterjetting Job
- 9:30 a.m. Vacuum Truck Operation and Safety
- 11 a.m. Hydroexcavation: Getting the Best Bang for Your Buck

SAFETY SESSION JOHN CONLEY

- 8 a.m. Preventing Tank Truck Rollovers

PSAI PORTABLE SANITATION ASSOCIATION INTERNATIONAL

- 9:30 a.m. State of Global Sanitation
- 11 a.m. Industry Image
- 1:30 p.m. Visions of the PSAI and the Education Initiative
- 3 p.m. What's New with OSHA Safety Requirements
- 4:30 p.m. An Introduction to Entering the Federal Government Contracting Arena

SALES & CUSTOMER SERVICE FRANK TACIAK

- 8 a.m. Be Always Profitable: Setting up the Sale
- 9:30 a.m. Be Always Profitable: Your Best Sales Presentation
- 11 a.m. Be Always Profitable: Servicing Your Sale
- 1:30 p.m. Be Always Profitable: Our Attitude to Success

NAWT NATIONAL ASSOCIATION OF WASTEWATER TECHNICIANS

- 8 a.m. CSA 2010 Implementation/Impact on Carriers/Drivers
- 9:30 a.m. DataQ's: When and How to Challenge
- 11 a.m. US DOT Update/Recent, Upcoming and Proposed Regulations
- 1:30 p.m. What is a Good Septic System Inspection?
- 3 p.m. The History of the PSMA Hydraulic Load Process
- 4:30 p.m. Improving Arizona's Inspection Program to Meet Modern Challenge

NOWRA NATIONAL ONSITE WASTEWATER RECYCLING ASSOCIATION

» SITE EVALUATION AND DESIGN OF ONSITE WASTEWATER TREATMENT SYSTEMS

- 8 a.m. Why Do We Care About Soils?
- 9:30 a.m. Design for Dummies
- 11 a.m. How to Do a Good Site Evaluation
- 1:30 p.m. Designing for Tough Sites
- 3 p.m. Wastewater and Soils: Clean It Up AND Get It To Go Away
- 4:30 p.m. Good Installation for Long-Term User Satisfaction

» FROM INSTALLATION TO MARKETING YOUR BUSINESS AND EVERYTHING IN BETWEEN

- 8 a.m. Look Out for Gophers! Taking Care of Mound Systems
- 9:30 a.m. ATU's - How to Make them Work
- 11 a.m. Rest Stops: A Case Study of Challenging Wastewater
- 1:30 p.m. Troubleshooting Onsite Systems
- 3 p.m. Installation Mistakes: How to Avoid and Fix Them
- 4:30 p.m. Marketing & Customer Service for Small Business Owners

SSCSC SOUTHERN SECTION COLLECTION SYSTEMS COMMITTEE

- 8 a.m. Personal Safety
- 9:30 a.m. Understanding the Nuances of a Quality CCTV Inspection Program
- 11 a.m. In the Trenches with Trenchless Pipeline Repair and Renewal
- 1:30 p.m. Nozzle Application: What, Why, Where, When and How?
- 3 p.m. Stop It! A Closer Look at Plugging
- 4:30 p.m. Getting the Most out of Your Combination Unit

BUSINESS TRAINING & MARKETING SUZAN CHIN

- 1:30 p.m. Marketing on a Shoestring
- 3 p.m. Getting Some... Brand Recognition
- 4:30 p.m. The Online Marketing Toolbox

VIEW FULL SESSION DETAILS AT:

WWW.PUMPERSHOW.COM



FEBRUARY 24-27, 2014

» INDIANA CONVENTION CENTER • INDIANAPOLIS, INDIANA U.S.A.

TUESDAY SESSIONS

February 25, 2014

SSCSC TRACK

- 8 a.m. Don't Fear the Shapefile
- 9:30 a.m. What's Important for Your Company; Is it Size, or Profit or Both?
- 11 a.m. 1 + 1 = 14: Cleaning and Inspection Equipment Working as an Entity

NAWT LAND APPLICATION TRACK

- 8 a.m. Be Ready to Land Apply
- 9:30 a.m. Soils and Cropping Systems
- 11 a.m. Land Application Rates and Nutrient Management

SAFETY COMPLIANCE TRACK

- 8 a.m. OSHA Confined Space and Fall Protection Untangled
- 9:30 a.m. Air Monitoring Application for the Liquid Waste Industry
- 11 a.m. Waterjetting Hose and Nozzle Safety

MUNICIPAL TRACK

- 8 a.m. Sealing - Take Control of Inflow & Infiltration in Manhole Sealing Systems
- 9:30 a.m. DC Water is Utilizing CIPP to Rehabilitate the Nation's Capital
- 11 a.m. Nozzle Explanation and Selections

INSTALLER TRACK

- 8 a.m. Septic Tank Bells and Whistles
- 9:30 a.m. Aeration Units for On-Site Septic Systems
- 11 a.m. Understanding ATU's, their Service Requirement, and Maintenance

GENERAL TRACK

- 8 a.m. Portable - The Best of Both Worlds - Liquids vs. Portion Control Deodorizers
- 9:30 a.m. Vacuum Loaders - Taking the Mystery out of Vacuum Truck Operation
- 11 a.m. DOT Compliance - The Value of DOT Certification for Vacuum Trucks

CUSTOMER SERVICE & EMPLOYEE DEVELOPMENT

- 8 a.m. Gen Y + Gen X + Baby Boomers = #@\$%???
- 9:30 a.m. Get and Keep the Best Co-Workers
- 11 a.m. Win, Win, Win in Residential Service Contracting

WEDNESDAY SESSIONS

February 26, 2014

BUSINESS TRACK

- 8 a.m. Improving Profitability through Tracking
- 9:30 a.m. How Paperless Operations Save Time and Money
- 11 a.m. Book More Calls - Wow More Customers

PORTABLE TRACK

- 8 a.m. Deodorizers and Making the Right Choices
- 9:30 a.m. Oh Shift! 6 Future Trends You Must Gear Up For to Compete and Succeed
- 11 a.m. Portable Restroom Service Units

MUNICIPAL TRACK

- 8 a.m. Sewer Cleaning 101
- 9:30 a.m. Underground Coatings - Restore Deteriorated Infrastructure
- 11 a.m. How Small Contractors Can Make Big Money Doing Manhole Rehabilitation

LIQUID WASTE TRACK

- 8 a.m. Right Sizing Your Pump System
- 9:30 a.m. Make More Money by Using a Biological Product with Your Services
- 11 a.m. Septic Drainfield Restoration

ADVERTISING & MARKETING TRACK

- 8 a.m. Advertising and Marketing for Service Companies
- 9:30 a.m. Getting Sales Personnel to Properly Price and Present
- 11 a.m. 7 Incredibly Effective Ways to Improve Your Sales



ONSITE INSTALLER COURSE

- 8 a.m. - 5 p.m. All Day Installer Course
Jim Anderson and Dave Gustafson
Sponsored by COLE Publishing and Onsite Installer Magazine



LIVE ENTERTAINMENT

Network with your peers over a 25¢ tap beer and enjoy a private concert just for Expo attendees! The Industry Appreciation Party is the must-attend Expo event!



» Brice, currently on tour with Brad Paisley, has celebrated three back-to-back No. 1 songs from his 'Hard 2 Love' album and his hit 'Parking Lot Party' stormed to the top of the Country radio charts. You can expect a great time as Lee Brice brings his energetic show to the Industry Appreciation Party!



LEE BRICE

Live

INDUSTRY APPRECIATION PARTY

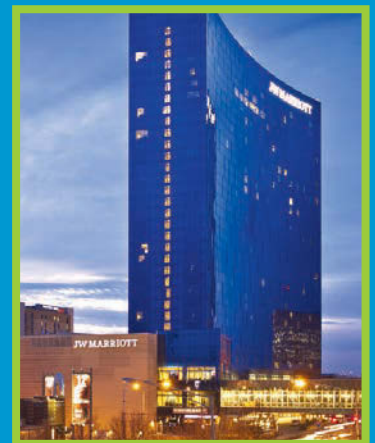
5 P.M. - WEDNESDAY FEB. 26

GRAND BALLROOM
JW MARRIOTT HOTEL

Admission included
with full registration!



» Attendees enjoy Craig Morgan at the 2013 Industry Appreciation Party.





Erik Gunn is a magazine writer and editor in Racine, Wis., where he operates Great Lakes Editorial Services. Readers may direct inquiries to him by contacting this publication at 800/257-7222 or emailing editor@cleaner.com.

Getting That Loan

Pay attention to these guidelines when it's time to borrow money for your next truck

By Erik Gunn

Is it time for another truck?

Whether your business is expanding or you simply need to replace an older piece of equipment, you can expect to spend a fair amount of time making your decision. That new asset is an important investment, and you'll want to make sure you get one that meets all your needs.

But once you've picked it out, your decisions aren't over.

Perhaps you have the resources to pay cash up front, but it's more likely you'll need to finance the purchase. And that means more choices.

Will you take financing from the dealer? Get a bank loan? Consider other options?

Your course of action is anything but automatic – and when you're preparing to take this step, you have to be deliberate about which choice will be best for you and your business.

DEALING WITH THE DEALER

Dealer financing – whether it's part of a program from the manufacturer or is independent of the company making your new vehicle – is probably the path of least resistance. Just being able to do “one-stop shopping” for a truck and loan together is likely to make it attractive.

Don't snub the value that convenience offers you. At the same time, though, don't forget that you have other options.

Financing through a dealer or manufacturer could be a bit more expensive. One reason is that in its eagerness to make a sale, the dealer- or manufacturer-affiliated lender might be willing to take a bit more risk on the loan than a conventional bank – and the riskier the lender thinks you are, the more you're going to pay.

If you're a strong candidate for a loan, however, you may do better going through that conventional bank.

TAKING IT TO THE BANK

For most businesses seeking a loan for some piece of heavy equipment – a service truck, a combination truck or a jetter, perhaps – “it is just as easy to get it through bank financing as it would be to go through your dealership,” says Bud Miller, chief sales officer and senior VP for small business sales and distribution at TD Bank.

“Strong borrowers are very attractive to banks these days,” Miller says. While the economy is still a bit feeble, the downturn winnowed out the weakest banks. The survivors are now ready to try to grow again, he says, and so “the competition is very, very strong for strong borrowers.”

THE '3 C'S'

The key to a bank loan is to understand that your banker's top priority is making sure the bank gets its money back and profits from the deal. One easy

way is to show them you're on top of all of the “3 C's” – cash flow, credit history and collateral.

You want to show the bank your business has a strong cash flow and that paying your loan on time will not strain your budget.

That doesn't mean you have to present a formal business plan simply for a loan for one piece of equipment, but you will need to be sure your recent business tax returns are in order and easily show the condition of your business.

In demonstrating that your cash flow can support the loan, you'll want to look forward, not just backward.

“If you're buying a truck because you just received a new contract, and your current cash flow is fine for what you currently have, but adding on will stretch your cash, having some projections for what the new business is going to bring you is going to be important.”

Bud Miller

If this is replacement equipment, your job may be fairly easy: Just show how you've profited from the unit your new purchase will take the place of. If the new one has efficiencies built in that could make it do more work in less time, make sure to show that, too, as concretely as you can.

But what if your new asset will allow you to expand into a new geographic area or a new subspecialty in your work? Your task might be a bit tougher, but if you're making a realistic decision, you should be able to demonstrate it. Show the bank you've crunched the numbers and produce solid evidence for the increased business you're projecting.

“If you're buying a truck because you just received a new contract, and your current cash flow is fine for what you currently have, but adding on will stretch your cash, having some projections for what the new business is going to bring you is going to be important.”

GOOD CREDIT

You'll also be asked for both a business credit report and, in all likelihood, a personal credit report. Paying your debts on time, as a business and as an individual, can make the difference down the road as to how much it will cost you to borrow when you need to make that purchase. If you ran into a crunch sometime back and it shows up on your report – business or personal – “be prepared to discuss what happened,” Miller said.

Another standard request will be for a copy of the invoice on the equipment you're buying. The bank "will want to make sure its value is appropriate to what the individual is paying." After all, if you do default on the loan, the bank will be stuck with having to resell the item in order to recoup its losses. That's the collateral.

Most lending programs for vehicles and similar business assets are pretty straightforward. Miller notes, however, that there are some additional options for smaller companies through the federal Small Business Administration.

SBA-backed loans can be especially helpful for newer companies that haven't been around long enough to build a strong business track record. Essentially, the government agency helps guarantee the private bank's loan, which can make the difference for some companies in their ability to borrow, or borrow at a better rate. From time to time, SBA has waived up front fees on loans like that, so make sure to see if your bank is participating in such a program and what help it might offer you.

SBA loans can also help if you want to put less money down, Miller says.

A LEASE ON LIFE

Still another option might be a lease. Leasing is likely to cost a bit more than a conventional loan, but Miller says it doesn't have to be significantly more expensive – perhaps a half a percent or 1 percent more. The big advantage to a lease is that it could allow you to buy the asset with no money down, he points out.

Whatever decision you make, however, one thing will make the whole process a lot easier: a strong relationship with your bank going in.

THE IMPORTANCE OF RELATIONSHIP

Forming that relationship and nurturing it long before you actually have to seek a loan can do a lot for smoothing the application and approval process, Miller says. That way you have an ally and a supporter in the bank who can hear the unique story of your business and then relate it up the chain in their own organization to make the best case possible on your behalf.

And when the time comes to buy that truck, you may find that the choices are actually a whole lot less complicated than you feared. **c**

What you learn on these pages could be worth

\$1,000s.

It's all yours for **FREE!** Subscribe/Renew today.
www.cleaner.com 800/257-7222

Steam & Hot Water Boiler Trucks

Custom Built, Fully Enclosed Units For Weather Protection & Security **For Sale Or Rent**

- Wet-Out Tables • Air Inverters • Static Resin Mixers
- 53' Reefer - Hydraulic CIPP Liner Unloader Trailers •

Phone: 815 - 712 - 8708 Fax: 815 - 220 - 1920
E-Mail: sales@cipp-services.com

Air & Water Inverters For 36" to 72" Diameter CIPP Liners Available For Rent

www.CIPP-SERVICES.COM www.FASTPIPELINING.COM

ACCREDITED EDUCATION & TRAINING



2014 PUMPER & CLEANER EXPO

Accrediting states are subject to change. Please visit pumpershow.com for the most up-to-date and accurate information regarding continuing education credits.

- | | | |
|------------|---------------|--------------|
| Alabama | Massachusetts | Pennsylvania |
| California | Michigan | Tennessee |
| Florida | Minnesota | Texas |
| Georgia | Missouri | Wisconsin |
| Indiana | Nebraska | |
| Iowa | Ohio | |
| Kentucky | Oregon | |

FEBRUARY 24, 2014

SESSION	DESCRIPTION	RECOMMENDED
Preventing Tank Truck Rollovers 8:00 AM - 9:00 AM Room: 136-138 Speaker: John Conley	One of the most important tools in the liquid waste industry is the tanker truck, and the most important person is the one who drives it. While the tank truck industry, including the liquid waste sector, has a very good safety record, it does face a special challenge in eliminating tanker rollovers. According to a study conducted for the Federal Motor Carrier Safety Administration, straight tanker trucks account for over 25 percent of all cargo tank rollovers. That same study found that over 75 percent of rollovers are the result of a driver action. Most rollovers are preventable. John Conley, Past President of National Tank Truck Carriers, will discuss efforts by industry and government to eliminate tanker rollovers and other trucking safety and operations issues.	
PSAI Visions of the PSAI and the Education Initiative 9:30 AM - 10:30 AM Room: 136-138 Speakers: Jeff Wigley, Owner, Pit Stop Todd Hilde, President and CEO, Satellite Industries	The Education Initiative exists within the PSAI to advance the use of portable sanitation around the world through education regarding its benefits to humanity. Todd Hilde, President of Satellite Industries, will present an overall vision for this important effort. It is an excellent opportunity to gain a new perspective on the portable sanitation industry, and learn how you can participate in spreading this important message. In addition, Jeff Wigley, the Immediate Past President of the PSAI, will provide operators with an overview of the activities, advancements and changes within the association over the past two years.	
PSAI Industry Image 11:00 AM - 12:00 PM Room: 136-138 Speakers: Nancy Gump, Owner, Andy Gump, Inc. Sarah Nasby, Vice President, S & B Porta-Bowl Restrooms	There is a growing effort among operators and the PSAI to change the public's perception of portable restrooms, because a negative public image does reduce rental fees and ultimately profits. This effort is well underway, as operators and suppliers belonging to the PSAI have joined together to actively promote a healthy, positive image of the industry through the use of press releases, professional marketing materials, partnering with other associations and working to establish an official Portable Sanitation Day to combat the negative press usually associated with this industry. Come learn what the Education Initiative is all about, and how it can help you increase your reputation and profitability.	
PSAI State of Global Sanitation 1:30 PM - 2:30 PM Room: 136-138 Speakers: Rajeev Kher, Founder, 3S Shramik Steve Brinton, VP of Sales, Satellite Industries	It is clear that portable sanitation protects billions of people around the world from sickness and deadly diseases. However, there are many areas of the world where portable sanitation is underused or non-existent, and billions of people suffer on a daily basis. Thankfully, there are operators in these regions who are making a difference. Come hear their stories, and be inspired as you learn how valuable your business is to the community you live in.	
PSAI What's New with OSHA Safety Requirements 3:00 PM - 4:00 PM Room: 136-138 Speaker: Anthony Kuritz, Compliance Officer, OSHA	Anthony Kuritz is an Industrial Hygiene Consultant working for the Bureau of Safety Education and Training within the Indiana Department of Labor as an INSafe Training Instructor. In this session he will provide important information on OSHA's new GHS requirements for all businesses, truck and driver safety guidelines and other regulations pertaining to workplace safety. There will be time for questions and answers at the end of the presentation.	



PSAI

An Introduction to Entering the Federal Government Contracting Arena

4:30 PM - 5:30 PM

Room: 136-138

Speaker: Terri Baldwin Flanigan, Consultant, Phoenix Site Solutions

You've made the decision to enter the world of government contracting. Now what? First, we will help you understand the contract and its requirements to determine if the contract is right for you. Second, we will walk you through the process of putting a bid together. Finally, we will provide you with a list of beneficial websites pertaining to government contracts.



NOWRA

Why Do We Care About Soils?

8:00 AM - 9:00 AM

Room: 240-242

Speaker:

Randy Miles, Soil Scientist, University of MO

Soil is a valuable component of decentralized wastewater systems, as it provides the ability to disperse large volumes of effluent, and serves as a treatment component to assure public health and environmental quality while fostering recycling and reuse of water and nutrients. A discussion of critical soil properties such as color, texture, and structure, and their direct or indicator role in treating, dispersing and recycling will be presented. This session will explore why specific technologies and associated designs may need to be employed in unique soil-site scenarios.



NOWRA

Design for Dummies

9:30 AM - 10:30 AM

Room: 240-242

Speaker: John R. Buchanan, Ph.D., P.E., Assoc. Professor, University of TN

Onsite wastewater system design must be based on the volume and characteristics of the wastewater, and the hydraulic properties of the soil. This session will focus on evaluating the wastewater source to determine the area of soil required for final treatment and dispersal. Specific discussion issues include wastewater strength, daily volume, long-term acceptance rate, and boundary conditions.



NOWRA

How to do a Good Site Evaluation

11:00 AM - 12:00 PM

Room: 240-242

Speaker:

Randy Miles, Soil Scientist, University of MO

Site evaluation is the most critical input into the design and installation of an onsite wastewater system. The site evaluator must provide a prediction of the hydrological flow characteristics within the soil landscape. This session will focus on evaluation of the internal soil properties relative to their occurrence in the landscape. Discussion will include the iterative process that the site evaluator should have with the installer and homeowner.



NOWRA

Designing for Tough Sites

1:30 PM - 2:30 PM

Room: 240-242

Speaker: John R. Buchanan, Ph.D., P.E., Assoc. Professor, University of TN

Onsite wastewater systems must be designed to match the conditions of the soil and site. Frequently sites are limited by wet soils and shallow restrictive layers. This session will discuss the decision process to determine the appropriate system configuration for various site and soil conditions. Further, this session will explore various site modifications to improve the site acceptability.



NOWRA

Wastewater and Soils:

Clean It Up AND

Get It To Go Away

3:00 PM - 4:00 PM

Room: 240-242

The primary goal in dispersing effluent in the soil treatment component is to encourage unsaturated flow. Unsaturated flow provides the ability for greater contact with soil particle surfaces while allowing oxygen in the larger soil pores, thus greater treatment than under saturated flow conditions. Specific discussion will include dispersal technologies, soil properties, and water management strategies and devices.



NOWRA

Good Installation for Long-Term User Satisfaction

4:30 PM - 5:00 PM

Room: 240-242

Speaker: John R. Buchanan, Ph.D., P.E., Assoc. Professor, University of TN

The primary goal when installing an onsite wastewater system is to protect public and environmental health. However, installers should also consider ease of maintenance and landscaping as the system is installed. The system is more likely to be maintained if the components are readily accessible. Appropriate landscaping can divert surface water away from system components. This session will focus on these important issues that can make the installation a long-term success.



NOWRA

Look Out for Gophers! Taking Care of Mound Systems

8:00 AM - 9:00 AM

Room: 243-245

Speaker: Sara Heger, Engineer, University of MN

This presentation will cover providing maintenance for mound systems. It will cover the tasks related to septic tanks, pump tanks, pumps, pressure distribution, inspection pipes, the soil treatment system itself and landscaping, including those troublesome gophers.



NOWRA

ATUs - How to Make Them Work
 9:30 AM - 10:30 AM
Room: 243-245
Speaker: Tom Fritts, Vice President,
 Residential Sewage Treatment Co.

Aerobic treatment units were first introduced in the mid 1950s, and have become a reliable technology when properly maintained. There are no longer just a handful of ATU manufacturers out there, and they all need qualified service providers to maintain the many different systems being sold today. We will review the basics of servicing these systems and some of the responsibilities that come with the NSF Standard 40 certification.



NOWRA

Rest Stops: A Case Study of Challenging Wastewater
 11:00 AM - 12:00 PM
Room: 243-245
Speaker:
 Sara Heger, Engineer, University of MN

The University of Minnesota's Onsite Sewage Treatment Program is working with the Minnesota Department of Transportation to evaluate the 51 septic systems serving the rest stops and truck garages across Minnesota at MnDOT facilities. Many of these systems are more than 30 years old, and the lack of information makes managing these systems, prioritizing replacement and designing replacement systems very difficult. It is generally understood that these systems are subject to challenging site conditions and wastewater characteristics. This presentation will cover protocol for investigation and the field data.



NOWRA

Troubleshooting Onsite Systems
 1:30 PM - 2:30 PM
Room: 243-245
Speaker: Tom Fritts, Vice President,
 Residential Sewage Treatment Co.

Understanding the "treatment train" and learning how to "run the rope" are skills you should have to be a proficient troubleshooter. Troubleshooting is more than just the importance of knowing how the system works. Many troubleshooting skills are no different than those used by your family physician or Mission Control. Having a good understanding of the system and following known procedures will allow your troubleshooting visit to be efficient and effective.



NOWRA

Installation Mistakes: How to Avoid and Fix Them
 3:00 PM - 4:00 PM
Room: 243-245
Speaker:
 Sara Heger, Engineer, University of MN

Installing systems right from the beginning will save you time and money. Key aspects of proper installation will be discussed, including protecting the natural soil conditions, proper bedding of piping, tanks and treatment units and working on difficult sites. But what do you do when it is already been messed up? Potential remedies will be covered.



NOWRA

Marketing & Customer Service for Small Business Owners
 4:30 PM - 5:30 PM
Room: 243-245
Speaker: Tom Fritts, Vice President,
 Residential Sewage Treatment Co.

Designing, installing, pumping and servicing ... is that enough? NO! Our businesses are not run by executives in penthouse offices ... we are the executives ... we are the entrepreneurs. Learning easy ways to market your company and effective customer service can take your profits to the next level. You may be surprised how many tools you already have that you are just not using.



SSCSC

Personal Safety
 8:00 AM - 9:00 AM
Room: 231-233
Speaker: John Chadwell,
 Western Regional Manager, EHS International

This is a fascinating, high-energy class that's applicable to challenges encountered in today's workplace. It will provide an overview of industry safety issues such as workplace violence and personal safety, as well as the tools necessary to deal with the challenges of working with the public and with fellow employees. Throughout attendees will be presented with concepts on how to develop a survival mindset that could help improve their overall safety through personal awareness training. Attendees will leave with a better understanding of personal safety at the workplace or worksite, and valuable lessons that can be applied to their lives outside of work.



SSCSC

Understanding the Nuances of a Quality CCTV Inspection Program
 9:30 AM - 10:30 AM
Room: 231-233
Speaker: Jim Aanderud,
 Owner/President, Innerline Engineering

The success or failure of any pipeline inspection program comes down to two important factors – the quality of the videos and the quantity of footage inspected. Falling short in either one can prove fatal for the contractor and the public agency alike. This class will clearly define the makeup of a quality pipeline inspection, and discuss the steps that must be taken to produce a superior video. We will also look at specific and proven ways in which we can increase production and profitability. This class will help define a successful CCTV inspection program.



	SESSION	DESCRIPTION	RECOMMENDED
SSCSC	In the Trenches with Trenchless Pipeline Repair and Renewal 11:00 AM - 12:00 PM Room: 231-233 Speaker: Mark Hill , P.E., Civil Engineer, Michael Baker Corp.	Trenchless pipeline repair and renewal is a growing industry with new innovative processes being offered. This class takes a look at the benefits and drawbacks of some of the most common and some of the innovative pipeline repair and renewal technologies currently on the market. We will look at the specific site conditions that are a challenge for trenchless rehabilitation, what has been successful, and what has fallen short.	Cleaner 
SSCSC	Nozzle Application: What, Why, Where, When and How? 1:30 PM - 2:30 PM Room: 231-233 Speaker: Duane Johnson , Vice President, Affordable Pipeline Services	Too often cleaning truck operators believe that only one or two nozzles are sufficient to complete any project. Just because they have had great results with one nozzle in certain cleaning applications, they unfortunately continue to use the same nozzle in every other cleaning condition. This class will look at a variety of cleaning situations and discuss the various options available for cleaning. We will focus on specific pipeline conditions, and then discuss the precise type of nozzle needed to efficiently clean in each of these situations. Our goal will be for each attendee to learn a new approach to pipeline cleaning, and to begin thinking outside of the box when it comes to encountering new and challenging cleaning situations. Our ultimate goal is to increase effectiveness and productivity for each operator by always using the correct nozzle in any given cleaning condition.	Cleaner 
SSCSC	Stop It! 3:00 PM - 4:00 PM Room: 231-233 Speaker: Denis Pollak	The ins and outs of plugging and line stopping of sanitary sewers can be very challenging, and a sizable risk to say the least. There are many ways of controlling flow with the use of inflatable and mechanical pipe plugs. The standard of care and safety when plugging is sometimes overlooked or misunderstood. In this class we will take a close look at plugging, and discuss their advantages and practical uses. We will also look at alternative methods of controlling flow, such as line stopping, pipe freezing and bypassing. Plugging can be a very effective tool in a variety of applications. For example, by controlling the flow, lines that would otherwise be inaccessible can be accessed and inspected by conventional CCTV inspection equipment. We will look at how plugging can be a valuable tool for CCTV, cleaning and rehabilitation projects.	Cleaner 
SSCSC	Getting the Most out of your Combination Unit 4:30 PM - 5:30 PM Room: 231-233 Speaker: Rick Lewis	During today's economic times, agencies and contractors are keeping their combination units much longer. In order to extend the life of these units, there are critical steps that must be taken in order to guarantee that they continue to function at the optimum level. In this class we will define the key components of a combination unit and provide the necessary tools to maintain the truck and maximize its efficiency. We will discuss procedures and tricks of the trade that are needed in order to maintain its proficiency while ensuring its safety.	Cleaner  Pumper 
WJTA-IMCA	Preparing for Your First High Pressure Waterjetting Job 8:00 AM - 9:00 AM Room: 133-135 Speaker: Gary Toothe	Waterblaster? Check. High-pressure hose? Check. Let's do some waterblasting. Hold on there, partner. There is a lot more to successful waterblasting than just loading up the truck. Let's start with, "What are you trying to do?" Now be careful, this may be a question with more than one answer! In this session we will explore what needs to happen before the wheels ever start rolling for that first (or any) waterblasting job.	Cleaner  
WJTA-IMCA	Vacuum Truck Operation and Safety 9:30 AM - 10:30 AM Room: 133-135 Speaker: Gary Toothe	One of the bigger myths in the industrial cleaning industry is that there is nothing to operating a liquid vacuum truck. Nothing could be further from the truth. What you don't know about proper vacuum truck operation and safety could cost you a job, a truck, or a life. In this session we will explore the basics of liquid vacuum truck operation and safety on materials from water up to flammable liquids, and what your people need to know before they fire that unit up.	Cleaner  Pumper 

Hydroexcavation: Getting the Best Bang for Your Buck

11:00 AM - 12:00 PM

Room: 133-135

Speaker: Neil McLean

Learn how to dial your hydroexcavation truck in to make your company look professional to your customers while increasing production, performance and safety. This program will discuss options like multiple wands and the right nozzle design to increase your performance. You will also learn how to use proper water management for the best production outcome.



Pumper

Cleaner



Marketing on a Shoestring

1:30 PM - 2:30 PM

Room: 133-135

Speaker: Suzan Chin, Founder and Chief Marketing Officer, Creative Raven

What you are experiencing in your business today is not because of what you are doing at this moment in time, but rather a direct result of what you did or failed to do six to nine months ago. This session will review five important marketing activities that can be accomplished on a modest budget in a relatively short period of time: 1. The World's Smallest Brochure: How to make your business card one of your most powerful marketing and advertising tools 2. Networking: Tips and tricks for tapping into your personal and professional networks and creating a powerful 15 or 30 second "elevator pitch" for networking events and meeting key strategic influencers and gatekeepers 3. Website Auditing: Performing an in-depth review of your online presence, developing a plan for making your website a better marketing or sales tool for your business 4. E-Newsletters: Using the power of e-based communication to nurture prospects into customers and keep existing customers wanting more 5. Press Power: Getting positive publicity and your name in the headlines and leveraging positive press exposure. Participants will leave with instructions, resources and samples on how to implement these budget-friendly marketing activities quickly and easily for their business.

Pumper

Cleaner

ONSITE installer



PRO



Getting Some.....

3:00 PM - 4:00 PM

Room: 133-135

Speaker: Suzan Chin, Founder and Chief Marketing Officer, Creative Raven

Brand recognition and positive publicity ... how do those big companies do it? This session will provide an interactive view of branding, its core components, what goes into creating a great brand and marketplace recognition. We will review why consistency is key, how color and presentation can set a company apart, as well as "personal branding." For many small to medium-sized businesses, personal branding is crucial to developing customer loyalty and powerful word-of-mouth referral business. Participants will learn: What goes into creating a great logo and memorable visual branding identity; Key components of establishing a brand and market perception; Essentials for developing your "personal brand" and engaging your customer. Publicity also plays a vital role in establishing a brand and keeping a company in the forefront of the target customer's mind. Often more powerful than paid advertising, it is a frequently overlooked and underused form of marketing, and this session will demonstrate how participants can tap into this inexpensive form of marketing that has incredible return on investment. Take aways include: Basics of developing a great news release; Insider tips for writing your own feature news articles; and idea generators for publicity and positive PR.

Pumper

Cleaner

ONSITE installer



PRO



The Online Marketing Toolbox

4:30 PM - 5:30 PM

Room: 133-135

Speaker: Suzan Chin, Founder and Chief Marketing Officer, Creative Raven

Be present and present ... navigating and exploiting the world of online marketing. Like it or not, online media is now a part of our daily lives. Smart phones, tablets, laptops, WIFI – we are a society that is "wired-in" so business owners need to take advantage of all this new and ever-evolving platform for communication. Today's online marketing toolbox needs to include many components: an engaging website with great content, social media, SEO and blogging. But how as a busy business owner do you develop these and ride the digital marketing wave? This session will review: The nuts and bolts of developing a responsive website; What business owners need to plan for and be ready to implement; Creating compelling content; How, when and why to use social media and the basic skills needed for getting involved. As SEO rules and algorithms have changed dramatically, we will share what can impact a site's rankings and the use of blogging to boost traffic, visibility and higher placement in search results including: How to set up a blog; Creating an editorial calendar; Ongoing maintenance tips; Connecting it to social media efforts. At the end of the session, participants will have a greater understanding of how all the different forms of digital communication work together, what tools are best suited for helping them achieve their goals and how to start incorporating e-based communication methods into their overall marketing strategy.

Pumper

Cleaner

ONSITE installer



PRO



NAWT

**CSA 2010 Implementation/
Impact on Carriers/Drivers**

8:00 AM - 9:00 AM

Room: 234-236

Speaker:

Buddy Mauger, Compliance and Training Specialist

This training will discuss the implementation of CAS 2010 and what it will mean for companies and drivers. We will cover what you will need to stay out of trouble with the new requirements of CSA 2010. We will show you how to check your CSA 2010 "BASIC" scores to see where any problems may be. We will also create a DOT Portal Access and review data via the U.S. DOT Portal.

Pumper

NAWT

**DataQ's: When and
How to Challenge**

9:30 AM - 10:30 AM

Room: 234-236

Speaker:

Buddy Mauger, Compliance and Training Specialist

In this session we will take a look at the U.S. DOT's DataQ Challenge Protocol, and how and what to look for when reviewing roadside inspections. The training will cover the following; DataQ's how to log on and create a user profile, submitting a challenge to an inspection, how to review your data to find changes and what to do to challenge an error, and how to request reports via DataQ.

**Pumper
Cleaner****PRO**

NAWT

**US DOT Update/Recent, Upcoming
and Proposed Regulations**

11:00 AM - 12:00 PM

Room: 234-236

Speaker:

Buddy Mauger, Compliance and Training Specialist

This training will cover recent changes, updates and proposed regulations. It will cover hours of service regulations (changes and court challenges), electronic logs (scheduled 2015), entry-level driver training requirements (scheduled 2014), National Registry of Medical Examiners (May 2014) and Skill Performance Standards (July 2014).

**Pumper
Cleaner****PRO**

NAWT

**What is a Good Septic
System Inspection?**

1:30 PM - 2:30 PM

Room: 234-236

This seminar will discuss the basics of a septic system inspection, including why it is important to locate and open all components of the system. It will provide information on locating techniques, evaluation of drainfields, and interacting with homeowners or other clients about scope of services and results.

Pumper**onsite
installer**

NAWT

**The History of the PSMA
Hydraulic Load Process**

3:00 PM - 4:00 PM

Room: 234-236

Speaker:

Ray Erb, Consultant, Thomas Erb & Sons, Inc.

The development of the Pennsylvania Hydraulic Load Test will be presented. This will include the background on why the test was developed, and what problems were hoped to be solved by conducting the test during a septic system inspection. The current procedures will be discussed, with an introduction to some of the problems with the test and potential solutions.

Pumper**onsite
installer**

NAWT

**Improving Arizona's Inspection
Program to Meet Modern Challenges**

4:30 PM - 5:30 PM

Room: 234-236

Speakers: **Dawn Long****Kitt Farrell – Poe**, Ph.D, Professor, University of AZ

The Arizona Transfer of Ownership Inspection Program began in 2001. In the past 13 years, it has become evident that improved inspection procedures are needed for determining the physical and operational condition of seepage pits and for properties that have been vacated for extended periods of time. Arizona is looking at the NAWT Hydraulic Loading Test as a standard operating procedure to address these issues.

**onsite
installer****Pumper**

NEHA

DEER in the Headlights

8:00 AM - 9:00 AM

Room: 237-239

Speaker: **Doug Lassiter**, Executive Director,
North Carolina Septic Tank Association

Downsized Effective Efficient Regulation (DEER) should be on everyone's minds. Most states and jurisdictions developed their regulations concerning onsite permitting and septage over decades of efforts, creating a piecemeal document that is cumbersome and confusing to the normal person. Many times it's a prescriptive standard and because of its mass, is slow to react and embrace the accelerated rate of technologies in our field. This discussion may step on some toes, but the industry is changing and we must change with it. DEER is essentially creating less bulk, more adaptability in the regulations bringing better returns in the commerce of residential and commercial building. This presentation will help you make positive change in how regulations affect you — the onsite wastewater professional.

**onsite
installer****Pumper**

NEHA

Basic Chemistry of Onsite Wastewater Treatment Systems

9:30 AM - 10:30 AM

Room: 237-239

Speaker: **A. Robert Rubin**,
Emeritus Professor, North Carolina State University

For onsite wastewater professionals, understanding the chemistry of wastewater is essential to understanding the technology needed for each situation. This presentation will provide a basic overview of the chemical reactions that take place in onsite wastewater systems, and how those reactions are influenced by outside factors. Alkalinity, water hardness, and the effects of temperature and time will all be discussed. By the end of this session, attendees will have a basic understanding of the chemical reactions that take place in onsite systems, and their relationship to technology that is used. Additionally, this will provide background material to support management requirements, an element of any successful system.

Pumper
ON-SITE
installer

NEHA

Making the Most of Your Experience: Training and Credentials for the Onsite Wastewater Professional

11:00 AM - 12:00 PM

Room: 237-239

Speaker: **Anthony Smithson**, Consultant

Historically, training in the onsite wastewater industry has been on-the-job and code-specific, or a notch better for those lucky enough to have training center in their state. National organizations like NAWT and NOWRA are working to change that by bringing training developed by the respected members of the Consortiums of Institutes for Decentralized Wastewater Treatment to areas that have been underserved in getting a more comprehensive view at onsite technologies and strategies. To further advance the profession, the NEHA certified installer of onsite wastewater systems credential examination will be offered with the training as applicable. This presentation will focus on how training and credentialing can develop stronger onsite programs, and on the positive impacts that training and credentialing can have on all levels of the onsite wastewater industry.

ON-SITE
installer

NEHA

Winners Communicate!

1:30 PM - 2:30 PM

Room: 237-239

Speaker: **Doug Lassiter**, Executive Director,
North Carolina Septic Tank Association

As onsite wastewater systems evolve and get more complicated, communication is needed – especially when the management of systems is required. This is a discussion on the essential nature of constantly improving communication lines within a business, whether it's with regulators, customers, employees, or the public. The leaders in any field of industry, in the community, or in government are always the persons that can communicate with their target audience. This presentation gives some common traits of successful people, how they improve their talents, and how they are rewarded for their efforts. Sometimes, it's not the shiny, new truck that people remember. It's the memory that the person took the time to communicate, and that's what separates them from their competition.

ON-SITE
installer

NEHA

Best Available New Technology

3:00 PM - 4:00 PM

Room: 237-239

Speaker: **A. Robert Rubin**,
Emeritus Professor, North Carolina State University

Amazing new technology for onsite wastewater systems is being developed all the time. But how do you know what works for what situation? This presentation will provide information on new technologies that incorporate disinfection, nutrient removal and water re-use. Included will be how these systems work, and what environments are best suited for their use as well as advantages and pitfalls of new technologies. The presentation will wrap up with a discussion of the management responsibilities that go hand-in-hand with new technology. Please note: it is recommended that you attend the Basic Chemistry presentation prior to this presentation to make the most of the material presented.

ON-SITE
installer

NEHA

Best Available New Technology: How to Get Your Regulator On Board

4:30 PM - 5:30 PM

Room: 237-239

Speaker: **Anthony Smithson**, Consultant

Every year new technologies are developed for the onsite wastewater industry. But fitting the new technology into old regulations takes a bit of work. This presentation will focus on taking new technology and ways to make it work within constrictive regulatory frameworks. Understanding how the regulatory process works and how new technologies are approved make the whole process a bit easier. Included will be a discussion of how regulations can be designed to foster new technology and improve practices across the industry.

ON-SITE
installer



NASSCO

Lessons Learned During Sewer Rehabilitation on Public and Private Property

8:00 AM - 9:00 AM

Room: 130-132

Speakers:
Robert Kelly, P.E., Director of Engineering,
City of Westlake

Scott Belz, URS Corporation

In 2001, the City of Westlake implemented an Inflow and Infiltration (I & I) program to eliminate excessive storm water from entering their sanitary sewer system during rain events. They hired URS Corporation of Cleveland, Ohio, to conduct the I & I testing portion of the program. Each area used similar rehabilitation techniques; however, through the course of each project, certain lessons were identified from the testing, to the bidding and finally during the construction phase. Various rehabilitation techniques, materials and methods have been conducted in each area. The city modified their program in the subsequent phases based on the lessons learned in each previous phase. Even though different rehabilitation methods have been used, all reduced I & I. The areas and year of completion are Salem-Radcliffe Subdivision (2001), Berkeley Estates (2004) and Canterbury Area (2007), and Melrose Area (2011). Through this program, the city has successfully eliminated I & I from each area tested, reduced basement flooding and improved overall storm drainage.



Cleaner



NASSCO

Pipe Bursting a Mature and Diverse Trenchless Technology

9:30 AM - 10:30 AM

Room: 130-132

Speakers:
Matt Timberlake, Vice President,
Ted Berry Company Inc.

Matt Werth

Pipe bursting is a mature and widely used trenchless method for renewal of deteriorated and undersized gas, water, sewer, utility conduits and other pipelines throughout the world. Pipe bursting is an economic pipe replacement alternative that reduces social disturbance to business and residents when it is compared to the open cut technique or pipeline rehabilitation techniques. This presentation will describe current pipe bursting practices used successfully throughout the world, and will assist those involved in pipeline replacement and/or rehabilitation projects to evaluate the capabilities of pipe bursting and its practical application. Information shared will be consistent with the IPBA guidelines for pipe bursting, which is widely recognized as the most current and factual pipe-bursting document available.



Cleaner

NASSCO

Resurgence of Chemical Grout Industry: Niche Business Opportunities

11:00 AM - 12:00 PM

Room: 130-132

Speakers:
Donald Rigby, Director of Marketing, Avanti International

Richard Schantz, P.E., Consulting

This presentation will include an overview of small business opportunities doing specialty grouting in the utility and construction industry. It also covers the various major market segments, overall soil, pipe trench and structure considerations, types of grouts available, how to develop your know-how and building a sound business reputation.



Cleaner

NASSCO

Chemical & Biological Control of F.O.G. in a 2,500-Mile Collection System

1:30 PM - 2:30 PM

Room: 130-132

Speakers:
Brian Conroy, Duke's

Jim Elliott, Vice President of Sales, In-Pipe

Rich Schici, In-Pipe

This session will review a treatment plant-friendly method of grease elimination from a sewer collection system. The technique causes the grease to be liquefied, allowing it to be flushed downstream without re-coagulating. This technique will be illustrated for the control of fats, oils and grease in a 2,500-mile collection system.



Cleaner



NASSCO

Lateral Rehabilitation, What's Available?

3:00 PM - 4:00 PM

Room: 130-132

Speaker:
Jacob Trapani

In this session we will offer a complete overview of all lateral and main/lateral connection rehabilitation technologies available today. In an effort to seek a viable, cost-effective solution to one of the most significant contributors to our failing sewer infrastructure, technology providers have developed several methods to structurally repair and/or seal lateral pipes and their connection to the main sewer. Individual lateral pipes often have multiple bends, diameter changes, shifted joints, cracks, deposits, and roots, which create considerable challenges to repair or seal. The lateral pipe connection to the sewer main also poses problems due to leaks, cracks and poor alignment. Accessibility of lateral pipe is another issue, since one end is located in the sewer main and the other in a building. In some cases, a clean-out exists either in or outside of the building. It is critical that the methods developed cope with the existing conditions to provide an effective product and installation method that can be installed efficiently.



Cleaner



NASSCO

Fiber Optic Temperature Sensing Technology for CIPP Cure Quality Control

4:30 PM - 5:30 PM

Room: 130-132

Speaker: **Don Barnhart**,
Product Manager, Janssen Technology

For cured-in-place pipe installation, fiber optic technology offers a quantum leap in temperature resolution over conventional practice to assist contractors in revealing and overcoming heat sinks inhibiting cure and for better control of the cooldown process as well. With temperature knowledge every inch along the liner, contractors also avoid costly labor and fuel costs associated with overcooking the liner.



Sales and Customer Service

Be Always Profitable: Setting up the Sale

8:00 AM - 9:00 AM

Room: 140-142

Speaker: **Frank Taciak**

This session teaches participants methods and guidelines for a successful sales call. Sales, whether we want them to or not, drive business. They either make our profit, or kill our success. Making a profit always starts before the job begins because "if it wasn't planned at the beginning it won't be found at the end." Participants will learn: How Sales = Profit; Implementing effective sales techniques and concepts; How to set up sales for business potential. Figuring what your costs are so that you charge for it. How to stop worrying about the competition. Setting up sales for maximum success. Participants will leave this session with key strategies to set up their sales process for maximum success.

Pumper Cleaner

ONSITE installer

MUNICIPAL SEWER WATER

GAS OIL MINING CONTRACTOR

PRO PORTABLE RESTROOM OPERATOR

Sales and Customer Service

Be Always Profitable – Your Best Sales Presentation

9:30 AM - 10:30 AM

Room: 140-142

Speaker: **Frank Taciak**

This session provides an overview of the actual sales process. Participants will learn a step-by-step method of presenting their business and creating a win-win outcome for both contractor and customer. Participants will learn: Where the sales presentation starts; How to handle calls, emails, and communication; Methods for setting up the appointment; Guidelines for meeting with customers; Effectively using selling options; How to close the sale. Participants will take home methods, ideas, and concepts that they can immediately use in making their sales process more successful.

Pumper Cleaner

ONSITE installer

MUNICIPAL SEWER WATER

GAS OIL MINING CONTRACTOR

PRO PORTABLE RESTROOM OPERATOR

Sales and Customer Service

Be Always Profitable – Servicing Your Sale

11:00 AM - 12:00 PM

Room: 140-142

Speaker: **Frank Taciak**

This session teaches participants how to both manage job fulfillment in their sales process, as well as create positive customer attitudes about their work. Customer service is key in effective business and making sure customers are happy is no longer an option in our marketplace. Participants will learn: Guidelines for setting up the work schedule; Basics of structuring man power on the job; Rules for managing contact with the customer; Strategies for guaranteeing payment. Participants will leave with a thorough understanding of customer service skills and how to best use these in all aspects of their work.

Pumper Cleaner

ONSITE installer

MUNICIPAL SEWER WATER

GAS OIL MINING CONTRACTOR

PRO PORTABLE RESTROOM OPERATOR

Sales and Customer Service

Be Always Profitable – Our Attitude to Success

1:30 PM - 2:30 PM

Room: 140-142

Speaker: **Frank Taciak**

Can YOU have a successful life and business? This session answers that question, and gives participants the tools they need to make their life ... WORK! Never before have there been as many tools and strategies available to make a business successful, but are we implementing them? Participants will learn: How to implement an effective plan; How to turn a successful business into a successful life; Learn to envision what winners look like. At the end of this session, participants will leave with the knowledge, skills, and motivation they need to achieve success in their life's work.

Pumper Cleaner

ONSITE installer

MUNICIPAL SEWER WATER

GAS OIL MINING CONTRACTOR

PRO PORTABLE RESTROOM OPERATOR

NPCA

7 Things you Should Know About Design, Installation and Maintenance of Precast Concrete Septic Tanks

3:00 PM - 4:00 PM

Room: 140-142

Speaker: **Claude Goguen P.E.**

As population in the U.S. continues to migrate away from cities and into rural areas, and as municipalities struggle with limited infrastructure budgets, there has been a larger demand for high-quality, efficient and durable onsite wastewater systems. In order for those systems to successfully treat residential wastewater, all the components must work efficiently to allow for the chemical and biological reactions to occur. This includes the proper design and performance of the structures that house and convey the wastewater as it's being treated. Precast concrete manufacturers are tasked with providing reliable structures that will be subjected to a variety of loads and extreme exposure conditions. At the same time, they must be easily installed, watertight, and able to house the evolving

ONSITE installer

(continued)



NPCA

(continued)
7 Things you Should Know About Design, Installation and Maintenance of Precast Concrete Septic Tanks

treatment technologies that serve to reduce nutrient loading into the soil and groundwater. This course will explore the stresses that precast concrete tanks are subjected to in service, and how they are designed to counter those stresses. The course will also include discussion on watertightness, proper installation practices and testing. The attendee will be able to describe stresses on an underground wastewater treatment tank in service, identify the main keys to a watertight precast concrete septic tank, and give three examples of poor tank installation practices that could jeopardize the effectiveness of the septic system.



NPCA

Grease Interceptors: A Slick Solution to a Greasy Problem

4:30 PM - 5:30 PM

Room: 140-142

Speaker:

Cyndi Glascock, Design Consultant, Gainey's Concrete Products

As communities across America are struggling to maintain aging sewers, it is more important than ever to manage harmful discharges that may compromise the effectiveness of the system. Precast concrete grease interceptors play a major role in pretreating grease-laden waste streams and protecting the sewer systems. They must be designed to provide easy access for maintenance and be sized to hold large quantities of grease to reduce pumping/cleanout costs. This course will cover elements of proper design of grease interceptors, including sizing and placement of baffling tees and filters. That design must also take into account anticipated loading conditions. The course will also include best practices in selecting the location for the grease interceptor as well as proper installation. Attendees will be able to: Size large outdoor precast grease interceptors; Differentiate between hydrodynamic and gravity-fed grease interceptors and their sizing charts; Define the key factors to designing grease interceptors for site loading requirements; Identify the considerations required for properly installing a grease interceptor.



Pumper

Cleaner




FEBRUARY 25, 2014

SSCSC

Don't Fear the Shapefile

8:00 AM - 9:00 AM

Room: 231-233

Speaker:

Mark Hill, P.E., Civil Engineer, Michael Baker Corp.

More and more agencies and companies have implemented GIS mapping and want to provide that data to their contractors performing work. This class will address what to do with the data, what it looks like, how to import it into common CCTV inspection software, and how to link data to it for a submittal.





SSCSC

What's Important for Your Company; Is it Size, or Profit or Both?

9:30 AM - 10:30 AM

Room: 231-233

Speaker:

Duane Johnson, Vice President, Affordable Pipeline Services

It is often said that most small businesses fail to have a plan and most often tend to operate reactively. As they get busier, they add more employees and more equipment in order to meet the added workload. Without a plan, this approach can have devastating effects on a company by destroying their financial solvency. It's important to understand the true meaning of growth and the real costs associated with it. This class will look at some of the important questions that must be asked and analyzed before embarking in any future growth. Participants will help bring into focus the proper approach for making correct business decisions. As an owner and manager of two distinct businesses (a drain cleaning company and a pipeline cleaning and inspection company), Johnson will take on a unique approach as he discusses some of the challenges that come from growth and the need to stay focused on profitability. Remember that bigger is not always better, sometimes it is just bigger.

Pumper

Cleaner






SSCSC

1 + 1 = 14: Cleaning and Inspection Equipment Working as one Entity

11:00 AM - 12:00 PM

Room: 231-233

Speaker:

Jim Aanderud, Owner/President, Innerline Engineering

Whether it's cleaning and video projects or specialized cleaning applications, the way in which combination units and CCTV inspection vehicles work together will determine ongoing success. In this class participants will look at the relationship between these two pieces of equipment, and discuss the importance of the working relationship between their crews. They will focus on the importance of planning, communication, organization and execution, then will look closely at the keys to success in cleaning and video projects, and the methods for maximizing production and profitability. They will also look at the proper use of CCTV cameras during high-end cleaning and cutting applications and discuss their importance for safety and cleaning effectiveness.



Cleaner

NAWT

Be Ready to Land Apply

8:00 AM - 9:00 AM

Room: 234-236

Speaker:

Bill Toffey, Owner, Effluent Synergies LLC

The purpose of this session is to start at the beginning when a decision is made to land apply septage. Local community and site conditions will be discussed; along with what equipment is needed to properly land apply under different conditions, agreements with landowners, scheduling application times, and what it takes to meet the Federal 503 regulations on pathogen control, including lime stabilization and reporting requirements.



NAWT

Soils and Cropping Systems

9:30 AM - 10:30 AM

Room: 234-236

Speakers:

Bruce Fox, Partner, Allstate Septic Systems LLP**Dave Gustafson**, UW MN

This session will concentrate on the land-application site from the perspective of the soil and slope conditions and how they impact application rates. Erosion and runoff control measures and oil separation requirements will be discussed. The identification of sensitive areas that need to be addressed, along with setback requirements from sensitive areas, buildings, and roads will be highlighted.



NAWT

Land Application Rates and Nutrient Management

11:00 AM - 12:00 PM

Room: 234-236

Speakers:

Bruce Fox, Partner, Allstate Septic Systems LLP**Jim Anderson**, Education Coordinator, NAWT

This session will look at both daily and yearly application rates. Establishing a nutrient management plan will be discussed. How to stay within the nitrogen application rate requirements while balancing crop nutrient needs will be discussed. Crop selection will be discussed from both an application rate perspective as well as crop usage for animal feed.



Customer Service & Employee Development

Gen Y + Gen X +**Baby Boomers = #@\$%???**

8:00 AM - 9:00 AM

Room: 237-239

Speaker: **Jerard Nighorn**, Lenzyme

Solve this equation ... this seminar will be packed with generation laughter. Attendees will learn how to solve hiring problems, keep customers, collect receivables and communicate across generations. The answer to this equation will help all business owners solve problems they may not even know are happening, and create a new way of looking at customers, workers, co-workers and generations in whole. Knowing the answer or knowledge will sure help to increase your overall business profits and take you and your business to the next level.



Customer Service & Employee Development

Get and Keep the Best Coworkers

9:30 AM - 10:30 AM

Room: 237-239

Speaker: **David Heimer**,

Chief Operating Officer, Service Roundtable

You can't grow your business if you can't find, hire and keep the right people. Why is it that some companies can't find qualified personnel, while other companies always have a flood of applicants and get to pick and choose? Why are some companies always fighting turnover battles, while other companies routinely keep their best employee for 20-30 years? Heimer will show attendees how to build a recruiting pipeline, attract the kind of employees they want, and keep them for years. He will share real-life positive and negative experiences from service business owners, and the lessons learned. You CAN find and keep the coworkers you want; you just need to learn how.



Customer Service & Employee Development

Win, Win, Win in Residential Service Contracting

11:00 AM - 12:00 PM

Room: 237-239

Speaker:

Bill Raymond, Co-Owner, Frank and Lindy

Plumbing Heating and Cooling

Learn how to create a well-balanced company that wows its customers, nurtures employees and achieves their financial goals. So often one or more of the three are missing. This workshop will focus on fundamentals from each area, bringing a better understanding of business planning, customer expectations and employee development and retention.



Safety and Compliance Track

OSHA Confined Space and Fall Protection Untangled

8:00 AM - 9:00 AM

Room: 240-242

Speaker: **Chris Cira**, Partner, MTech

This session presents a different and unique high-level overview of confined space, air monitoring and fall protection regulations. We will untangle the multitude of regulations regarding these topics and bring it down to a practical and understandable approach and most important an approach that can actually be implemented in the field. We will also touch on the differences related to general industry, construction, agriculture and maritime regulations, and which one impacts you in the field.



Safety and Compliance Track

Air Monitoring Application for the Liquid Waste Industry

9:30 AM - 10:30 AM

Room: 240-242

Speaker: **Ed Fitzgerald**, Jack Doherty Companies

This program will outline the application and use of air monitoring equipment for confined space and area monitors as it applies to the liquid waste industry. It will be in layman's terms, and will include a review of terminology such as PPM, LEL, TWA and % X Volume. All alarm points, as they apply to the industry, will be compared to day-to-day exposures that we all experience so that the employee will understand that they are protected and will not feel any effects when the alarm sounds.



VACUUM LOADERS

Vacuum Loaders

9:30 AM - 10:30 AM

Room: 243-245

Speaker: **William Akins**, Manger, Vac-Con Services Inc.

This program will outline the different applications of various vacuum trucks (combination machines, hydroexcavators, and industrial machines). It will also outline use cases for determining necessary equipment. This program will then give a detailed overview of industrial vacuum trucks, their components, and capabilities. It is intended to be interactive with active Q&A throughout.



DOT COMPLIANCE

The Value of DOT Certification for Vacuum Trucks

11:00 AM - 12:00 PM

Room: 243-245

Speaker: **Anne Brantley**, Director of Product Development, Wastequip Cusco

In this session attendees will discuss the purpose of DOT certification to strengthen a truck's tank and bumper to prevent spillage of hazardous materials during rollover accidents or rear-end collisions. Trends indicate that DOT certification is being required for more types of materials – not just hazardous material. DOT certification can increase the price of vacuum truck by as much as 20 percent, so when should fleet owners make that extra investment? What are the requirements for truck DOT certification, and how can you choose a reputable manufacturer to ensure your fleet is in compliance with evolving regulations?



MUNICIPAL

Take Control of Inflow & Infiltration in Manholes

8:00 AM - 9:00 AM

Room: 130-132

Speaker: **William Goff**, Sealing Systems

Many people are aware of the challenges inflow and infiltration bring to any utility. However, they may not be fully aware of how easy it is to identify the problems, and what methods are recommended to fix them. This presentation will give attendee a closer look at infiltration identification, and methods and products to use for correction and remediation of infiltration and rehabilitation. It will also address proactive efforts and products to reduce or deny infiltration and thus eliminate the need for rehabilitation. Prevention is always less costly than remediation.



MUNICIPAL

DC Water is Utilizing CIPP to Rehabilitate the Nation's Capital

9:30 AM - 10:30 AM

Room: 130-132

Speaker: **Muminu Badmus**, Projects Manger, Perma-Liner Industries, LLC.

DC Water provides critical water and sewer services to the nation's capital; the infrastructure that supports these services is old and deteriorating. The median age of the 1,800 miles of sewer pipe is 86 years old, with some in-service trunk mains installed before the Civil War. One of DC Water's strategic initiatives is to evaluate different technologies to improve service delivery while lowering asset life cycle costs. The lateral program seemed a likely candidate to evaluate trenchless solutions, since over 20 percent of the project costs were related to restoration. DC Water staff were interested in a trenchless solution, specifically a cured in place pipe (CIPP) solution, as a possible alternative to the traditional open-trench method.



MUNICIPAL

Nozzle Explanation and Selections

11:00 AM - 12:00 PM

Room: 133-132**Speaker:****Scott Paquet**, President/CEO, NozzTeq Inc.

In this session participants will discuss the different types of nozzles available on the market today, including how you make your selection and what to look for in a nozzle. Paquet will examine hose-line loss and what this means when setting a nozzle up properly. Participants will look at the design of nozzles and why some are more effective than others. This will give the end user an education in determining what nozzles to purchase and in the selection of nozzles. A supplied hose-line loss chart will explain why the end of the hose pressure is the most important. Participants will also cover how to test nozzles with a cost-effective test kit. This will also include complete instructions to make the proper selection and an understanding that one nozzle does not do it all.

Cleaner

INSTALLER

Septic Tank Bells and Whistles

8:00 AM - 9:00 AM

Room: 133-135**Speaker:****Bob Smith**, Engineer, Orenco Systems, Inc.

There are a number of different accessories for installation with a residential septic tank. The broad categories include equipment for ease of access, equipment for improvement of effluent quality, equipment for ease of operation and maintenance and equipment for improving dispersal distribution. This presentation will go over these four classes of septic tank accessories and how they can benefit the function and maintenance of an onsite system.

ONSITE installer

INSTALLER

Aeration Units for Onsite Septic Systems

9:30 AM - 10:30 AM

Room: 133-135**Speaker: David Flagg**, President/CEO
Septic Services, Inc.

This session will touch on the history of aeration, and the difference between aerobic and anaerobic digestion. It will move along to the many types of tanks, aerators and features and benefits of each design, along with diffuser types, filtering, electrical requirements, and safety and maintenance of the system, effects on the adsorption field, including both pictures and video. Aeration is not a new process, as its use began at the turn of the century in municipalities, and began to be used on residential sites as far back as the 1940s. However, because of the high cost and less concern for the environment, the process did not become popular until many years later. In a septic tank, anaerobic bacteria digest the sewage and require little to no oxygen to break down the waste material. In an aeration tank, aerobic bacteria require lots of oxygen to survive to break down and digest the sewage, so consider anaerobic bacteria at the speed of Wile E. Coyote and aerobic bacteria like the Roadrunner. By aerating a tank, it allows you to process more sewage in a smaller space, producing a cleaner effluent to the adsorption system. The benefits in the adsorption field will also be discussed.

ONSITE installer

INSTALLER

Understanding ATUs, their Service Requirement, and Maintenance

11:00 AM - 12:00 PM

Room: 133-135**Speaker: Doug Dent**, Ecological Labs

The presentation provides detailed information on how to service ATU systems, how to evaluate problems from influent to effluent, and the equipment needed to assure correct identification of system problems from as simple as; when to pump an ATU, the need to check pH levels from time to time, dealing with odor issues, to understanding the good guys in biology to the bad guys, this referring to sludge bulking caused by filamentous microorganisms. The presentation reviews ATU design and comparison to standard onsite septic systems, with adequate attention to the importance of the ATU's relationship with biology presented in an easy to understand technical format that will satisfy both new and seasoned operators, and service personal. The program covers the ATU biological process, factors that effect ATU performance, and methods and tools necessary to identify, correct, and resolve many ATU problems. The session includes hand-out materials and information to meet the session's goal of achieving a level of knowledge and understanding that will allow proper service of ATU systems by those that attend the session.

ONSITE installer

PORT. SANITATION

The Best of Both Worlds

8:00 AM - 9:00 AM

Room: 243-245**Speaker: David Roncadori**, J & J Chemical Co.

In this session participants will discuss liquids vs. portion control deodorizers. Liquids can be non-formaldehyde, formaldehyde or biological. The discussion will include how liquid deodorizers can be applied; direct charge, dilute, or premix – controlling the use of liquid deodorizer utilizing a blend system; and what strength is best for you. Portion control includes tablets or packets. Discussed will be choosing the right portion control method for your needs; one-size-doesn't-fit-all requirements; how seasons and environment can influence your choice of product; and the pros and cons of liquid and portion control, including storage, transport, spillage, cost, and limitations.

PRO
PORTABLE RESTROOM OPERATOR

FEBRUARY 26, 2014

INSTALLER

COLE Publishing's Onsite Installer Course

8:00 AM - 5:00 PM

Room: 234-236

Speakers:

Dave Gustafson, UW MN

Jim Anderson, Education Coordinator, NAWT

This 8-hour course will train participants on the basics of installing onsite wastewater treatment systems. It will include discussion on installing sewage tanks, trenches, pumps and pump stations, above-ground systems, and media filters.


PORT. SANITATION

Deodorizers and Making the Right Choices

8:00 AM - 9:00 AM

Room: 237-239

Speaker:

Dale Wallace, GM, Green Way Products
division of PolyPortables, LLC

This seminar will cover a number of questions and decisions to be made that will help guide new and or established operators on how to properly service and maintain their investment, "The Portable Toilet." The decisions you make will impact the success of your business. Why do we do what we do? What governs your choices when you decide how and how much to service your customer? This discussion addresses: Why this business? How do you grow your business? How do you make the most of your business? How do I take care of a toilet? What about urine scale and bio films? What should you use as a deodorizer with so many choices out there? And should you detail your toilets, and if so, how?


PORT. SANITATION

Oh Shift! Six Future Trends You Must Gear Up For to Compete and Succeed

9:30 AM - 10:30 AM

Room: 237-239

Speaker:

Beverly Lewis, President, Beverly Lewis Group

Several global trends on the horizon will have a major impact on your sanitation business. This session will discuss six epic shifts that will change the face of portable sanitation. The seminar will raise awareness and create long-range visibility for these trends, and discuss specific strategies to turn these changes to your advantage. Topics include technology, workforce demographics, communication, consolidation and sustainability.


PORT. SANITATION

Portable Restroom Service Units

11:00 AM - 12:00 PM

Room: 237-239

Speaker: **Randy Tischendorf**, Sales,
Imperial Industries, Inc.

This seminar will cover the proper selection of chassis in correspondence with weight distribution and the Bridge Law. It will supply the attendee with both the maximum capacities allowable on a given chassis, taking into consideration if a trailer is being pulled. The seminar will cover the estimated overall weight of tanks manufactured in aluminum, steel and stainless steel and the proper chassis selection for each basic tank capacity. Also discussed will be the various styles of tanks used in the portable restroom industry, and their uses.


**Business Training
and Marketing**

Improving Profitability through Tracking

8:00 AM - 9:00 AM

Room: 240-242

Speaker: **Clint Smith**, CallSource

In a sea of competing companies, what makes your company stand out from the rest? Callers are looking for precisely this answer, and how you communicate this will separate you from your competition. Learn how to get the best "bang for your buck" on the thousands you spend to get the phone to ring. While call volume is a key component, you're still ultimately as good as you book. Timing, tone, and confidence all play large roles in earning the caller's trust. In order to get more techs to more doors, you must first improve your current situation. Knowing how to find these improvement areas is crucial since you cannot improve what you don't measure.







**Advertising and Marketing
for Service Companies**

8:00 AM - 9:00 AM

Room: 243-245

Speaker: Jeff Bruss,
President, COLE Publishing

Often overlooked by service companies, a strong marketing and advertising program will keep your business in front of both customers and the competition. Topics covered include phone book advertising, social media, Internet, newspapers and more. Learn how to develop your brand and the most economical and intelligent places to put it.

**How Anywhere, Anytime
Paperless Operations Save
Time and Money**

9:30 AM - 10:30 AM

Room: 240-242

Speaker: Joel Smith, Business Consultant

This presentation will go over a typical business cycle for portables and liquid waste services (brown, yellow, black oil, septic, graywater) from first customer contact through verification of service. It includes how changes can save from 15 to 45 percent; invoices, route sheets, receivables, customer contact, marketing, and order taking; implementations for the field; how to get the greatest benefits; how to handle exception customers; and services to differentiate your company from the competition.

**Achieving Financial Balance
in Your Business**

9:30 AM - 10:30 AM

Room: 243-245

Speaker:
Russ Decker, CEO, Trade-Serve

This session will teach attendees how to properly price sewer, septic and plumbing services, and how to market using discounts without losing your profits. It will include how to easily plan for retirement, depreciation, taxes and retained earning while having sufficient money for the owners' draws. Achieve financial balance between your production employees, customers and the shareholder(s), and get access to software that will help you. This session will be hands-on practice with take-home handouts that you will be able to use in your business immediately.

**Book More Calls –
Wow More Customers**

11:00 AM - 12:00 PM

Room: 240-242

Speaker:
Brigham Dickinson, Founder,
Power Selling Pros

In this class, owners will learn to master a set of principles that will help them and their call-handling team book more calls and wow more customers over the phone. What better way is there to keep your dispatch board full than to book the calls that are already coming in to your office? With this class, you'll learn how your call-handling team can become more passionate in their interaction with your customers; they'll not only book more calls, but also become fundamentally great at taking care of customers. For business owners looking to book more calls and wow more customers, your attendance at this class is a must.

**7 Incredibly Effective Ways
to Improve Your Sales**

11:00 AM - 12:00 PM

Room: 243-245

Speaker: Ara Mahdessian, CEO, ServiceTitan

In this session attendees will take a look at the simple yet incredibly effective methods that the most successful contractors use to improve their sales. They will discuss how they motivate technicians, ensure satisfaction, generate more repeat business and other secrets that you can quickly and easily implement when you return to your office.

**Sewer Cleaning 101**

8:00 AM - 9:00 AM

Room: 130-132

Speaker: Ken Billingham, KEG Technologies

This session discusses the understanding of how the crew, equipment and nozzles are integral to the successful completion of the task at hand. Topics discussed include pressure drop, cleaning procedures, and nozzle selection, and how they are related to each other. Learn how to effectively clean sewer and storm lines using minimal fuel, water and time. This class will be of interest to owners, managers and operators alike.



MUNICIPAL

SEALING: Underground Coatings – Restore Deteriorated Infrastructure

9:30 AM - 10:30 AM

Room: 130-132

Speaker: Stewart Nance,
Sales & Marketing Manager, Interfit USA

Infiltration into sewer systems is insidious, pervasive and monumentally expensive. Collection systems develop increasingly worse infiltration over time due to defective and deteriorating components. Cementitious and epoxy liners, and the combination of both, have proven effective in permanently and economically restoring and protecting deteriorated structures, and thus eliminating infiltration.



MUNICIPAL

Rehabilitation: How Small Contractors Can Make Big Money Doing Manhole Rehabilitation

11:00 AM - 12:00 PM

Room: 130-132

Speaker: Bill Shook, President and Founder,
AP/M Permaform

There are more than 20 million manholes in America, and more than half are over 50 years old and in need of serious repair. This session discusses the variety of techniques that are presently available to seal, reinforce and protect old block, brick/mortar and corroded precast manholes to better than new condition without digging. For a small investment, contractors can net big returns. Case studies will be shared.



PUMPER

Right Sizing Your Pump System

8:00 AM - 9:00 AM

Room: 133-135

Speaker: Jason Reading, Sales Manager,
National Vacuum Equipment

Attendees will discuss the process for evaluating an application and determining what would be the correct system for use. It will provide attendees with a takeaway that includes a list of "Rules of Thumb," pitfalls to avoid and confirmation of steps that the end user will find helpful to ensure they have the right system for their job.



PUMPER

Make More Money by Using a Biological Product with your Services

9:30 AM - 10:30 AM

Room: 133-135

Speaker: Mireya Eavey, One Biotechnology

Using a biological product adds beneficial bacteria needed for a healthy tank. The product will continue to flow through the drainfield and breakdown the biomat. Subjected to bleaches, detergents, and other chemicals, naturally occurring bacteria struggle to survive and keep up with the influx of waste in residential and commercial septic systems. Adding a biological product formulated to work in the harsh conditions that requires no pH neutralizing and is performance ready, will decrease the amount of times a system has to be pumped, while giving a customer lasting results.



PUMPER

Septic Drainfield Restoration

11:00 AM - 12:00 PM

Room: 133-135

Speaker: Mark Reynolds, CEO/President,
RCS II and Municipal Sales, Inc.

According to the US EPA 90 percent of all septic failures occur in the drainfield. It's important to understand the system your working with, and to take the time to see if your building department has an as built drawing of the system. What are the reasons systems fail? This session will discuss the steps to solve these issues.



Stay up to date on all things Expo with
www.pumpershow.com

PUMPER & CLEANER ENVIRONMENTAL EXPO

EDUCATION DAY: FEB. 24, 2014 EXHIBITS OPEN: FEB. 25-27, 2014

INDIANA CONVENTION CENTER - INDIANAPOLIS



PRODUCT SPOTLIGHT

High-pressure vacuum unit maneuvers tight locations

By Ed Wodalski

The SmartCombi PRO combination high-pressure/vacuum unit from ROM is designed for cleaning house connections and sewers, as well as draining flooded basements and grease traps.

The combined high-pressure/vacuum unit measures 3,450 by 1,600 by 1,650 mm (135 by 62 by 64 inches). It has a 3,000 liter hot-dip galvanized tank (792 gallons) with slanted bottom for easy dumping and choice of three waste/freshwater tank options (2,000/1,000 liters – 528/264 gallons, 1,800/1,200 – 475/369 and 1,600/1,400 – 422/369).

The 1,290 kilogram system (2,843 pounds) is available in PTO or diesel (Kubota turbo engine) drive in a choice of configurations (2,900 psi and 19 gallons of flow or 2,175 psi with 26 gallons of flow) and vacuum systems (conventional or advanced thrust jetter) with up to 1,087 psi.

“The SmartCombi PRO has large capacities, yet is compact and lightweight and can be mounted on 6- to 7.5-ton vehicles for maneuvering narrow city streets and other locations that are difficult to access,” says Charles van den Berg, Area Manager Export, for ROM.

“The Speck high pressure pump delivers cleaning pressure up to 200 bar [2,900 psi] and water flow of up to 100 liters [26 gpm] for cleaning



house connections and main sewer lines up to 600 mm [23 inches] in size.”

Other features include the hydraulically driven, high-pressure, zinc-coated steel reel mounted on a swiveling frame with 270-degree reach for extended maneuverability. The unit’s low center of gravity is designed for safer road handling. Options include traffic safety package, remote control, frost protection, hot-water system, etcetera. www.rombv.com.



1



2



3

1 WATER CANNON JETTER PACKAGE

The XT jetter package from Water Cannon delivers up to 5.5 gpm and pressure to 4,200 psi. It functions as a drain cleaner and pressure washer. Powered by a Honda GX 630 engine, it is available with an Annovi Reverberi or General Pump. Features include pulsation on demand, adjustable throttle control from 100 psi and up with ball valve shut-off. The 15-gallon fuel tank, electric key start and portable wheel kit are included. Accessories include Hosetract hose reel to handle 300 feet of 3/8-inch Piranha jetter hose, 125 feet of 1/4-inch hose and four stainless steel nozzles. **800/333-9274; www.watercannon.com.**

2 RIDGID CS6 DIGITAL RECORDING MONITOR

The SeeSnake CS6 digital recording monitor from RIDGID, equipped with SeeSnake HQ software, captures still images and video clips, enabling users to edit, archive and deliver reports directly to customers through USB thumb drives or via print, DVD and online. Features include 5.7-inch daylight-readable

LCD screen, water-resistant keypad, on-screen keyboard and integrated microphone and speakers. The monitor docks onto the SeeSnake Max rM200 camera system for transportation and storage and is compatible with RIDGID’s line of SeeSnake reels. **800/769-7743; www.ridgid.com.**

3 NLB UNIVERSAL NOZZLE HEADS

Universal heads for Typhoon self-rotating nozzles from NLB Corp. are designed to cut through blocked tubes while polishing the tube’s inside diameter. The seven heads – used with Typhoon models RPN1510, RPN2410, RPN1520 and RPN2020 – combine cutting surfaces and polishing orifices in a single tool. The nozzles clean tubes down to 5/8 inches in diameter, rotating at speeds up to 7,000 rpm. The rotating action comes from the head instead of the barrel, focusing the force of the water (15,000 to 40,000 psi) up front. Nozzles are made of high-grade stainless steel and coated with titanium nitrate for long life. **877/652-7796; www.nlbcorp.com.**



4



5



6



7

4 KNIPEX PLIERS WRENCH

The pliers wrench from KNIPEX Tools combines the functions of a pliers and wrench in one tool with a 10-to-1 lever ratio. Models are available in sizes from 6 to 12 inches with capacities from 0 to 1 1/4 inches. Comfort grips are available in 6- to 10-inch models. 847/398-8520; www.knipex-tools.com.

5 GALBREATH 200 SERIES ROLL-OFF TRAILER


The A5-200 Series roll-off trailer from Galbreath, a Wastequip brand, has a container size capacity of up to 26 feet that can handle payloads from 33,000 to 39,000 pounds. The trailer is available in outside rail, extendable tail, inside/outside rail and deadlift configurations. Features include two telescoping cylinders that handle up to 60,000 pounds. Options include tarp systems, aluminum hubs, aluminum or poly fenders, work lights, inside cab controls, automatic grease systems and tool boxes. 877/468-9278; www.wastequip.com.

6 FLIR E-SERIES THERMAL CAMERAS

E-Series (E4, E5, E6, E8) thermal cameras from FLIR Systems are designed to track electrical and mechanical overheating, moisture ingress, missing insulation, air leaks and other thermal issues. The camera has a 3-inch color LCD display, wide-angle focus-free lens, intuitive on-camera button controls and MSX (multispectral dynamic imaging) that integrates visible details from digital photos onto IR images. 866/477-3687; www.flir.com.

7 RODDIE R2 LATERAL BURSTING SYSTEM


The R2 lateral bursting system from RODDIE has a pulling rate of 8 feet per minute. Available in 30- and 50-ton units, the system is made from high-intensity aluminum for lighter weight and separates into two components (50 and 60 pounds) with the removal of two pins. 888/406-3821; www.rodдиеunderground.com. c



CUSTOM DRILLED NOZZLES

SEWER SQUAD PREMIUM KIT™

A Value Priced Nozzle Kit

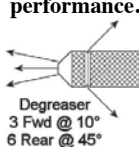


NPT Size Price Savings*

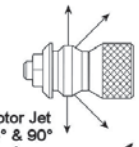
1/8"	\$224	\$37
1/4"	\$254	\$44
3/8"	\$294	\$52
1/2"	\$373	\$67
3/4"	\$500	\$93

*Compared to individual prices

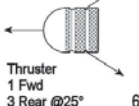
- Each nozzle is custom drilled to match your pump's flow and pressure specs for optimized nozzle performance.
- Each nozzle is made with heat treated 416 stainless steel for superior corrosion and wear resistance, and rated up to 10,000 psi.
- Most orders shipped within one business day.
- 100% satisfaction guarantee.



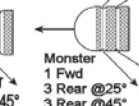
Degreaser
3 Fwd @ 10°
6 Rear @ 45°



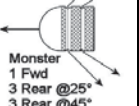
Rotor Jet
45° & 90°




Thruster
1 Fwd @ 25°
3 Rear @ 25°



Flusher
6 Rear @ 45°



Monster
1 Fwd @ 25°
3 Rear @ 45°



CALL TOLL FREE: 877-457-2782

North Royalton, OH 44133 • www.aquamole.com • Fax: 440-237-2987

Irrigation fittings are for irrigating – NOT vacuum.

How many dollars are you spending **SUCKING AIR?**

Industry-proven, quality vacuum couplings from Bandlock will put money into your pockets.



4" to 12"
Male Coupler



4" to 12"
Female Coupler



Steel Crown
4", 6"
and 8"
Press End



Hazardous Material
Profile Gaskets (Safety)



Rubber Gaskets



6" and 8"
Aluminum Weldon



Aluminum & Steel Pipe



4" and 6" High
Abrasive Bulk Nozzles



Special "Y" Reducers



BANDLOCK "Y"s



EZ Lift Clamps



Standard & International
4" to 12"



Wet Valve, 6",
360° Injected



Male and Female
4" to 12" End Plugs



BANDLOCK Reducers



BANDLOCK
AMESBURY GROUP

Download Catalog From Our Web Site!
www.bandlockcouplers.com

1-800-659-2978
Superior "Quick" Connect Vacuum And Pressure Couplings And Accessories

MADE IN THE U.S.A.

Talbert hires area sales manager

Talbert Manufacturing named Troy Geisler area sales manager for the Great Lakes region. Talbert manufactures heavy-haul trailers and transportation equipment.



Troy Geisler

Pipeline Renewal Technologies names distributor

Pipeline Renewal Technologies named Flow-Liner Systems distributor of Micro Basic, Micro Pro, Micro Premium and Nano model cutters to small diameter lining installers.

Peerless Electronics opens online store

Peerless Electronics, stocking distributor for Danfoss Industrial Automation, opened the Peerless/Danfoss Online Store (www.peerlesselectronics.com/store/brands/danfoss.html). The site offers pressure switches, transducers, sensors and temperature sensors.



Franklin Electric relocates headquarters

Franklin Electric relocated to its new World Headquarters and Engineering Center in Fort Wayne, Ind. The 118,800-square-foot facility houses the company's 245 employees with room for future growth, as well as a 24,000-square-foot testing lab.

Jack Doheny merges with Jet-Vac

Jack Doheny Companies completed its merger with business affiliate Jet-Vac in Wharton, N.J. The merger provides financial and managerial support, enabling the company to be more responsive to customers in the Northeast. Ty Rose was named general manager for the 15,000-square-foot, eight-bay Wharton facility. Groundbreaking is scheduled for spring. The facility will double the size of the service center and triple the size of the parts department. JDC has sold sewer cleaning, DOT-certified vacuum trucks, pipeline inspection and other related equipment since 1972.

HOBAS Pipe adds field support representatives

HOBAS Pipe USA added Michael Jensen and David Tisdale as field support representatives. They will be based in Houston, Texas.

Kline's receives safety award

Kline's Services received the No Lost Time Accidents Award for its commitment to safety and completing 365 days without lost time to injuries or accidents. Kline's said the achievement was the result of its commitment to employee safety and implementation of a Best in Class safety program.

Martin Engineering acquires TNJ Industries

Martin Engineering acquired TNJ Industries, an Arizona-based company specializing in dust management for crushing and conveying of mined materials. The acquisition expands Martin's line of dust control products.

GapVax features Orange County Chopper at Expo

GapVax celebrated its 25th anniversary by commissioning a custom-built chopper motorcycle from Orange County Choppers. Unveiled in November, the bike's fabrication was featured on the CMT Network in December as part of the new *Orange County Choppers* TV series. The customized motorcycle will be on display in Booth 6004 at the Pumper & Cleaner Environmental Expo International, Feb. 24-27. Paul Teutul Sr., founder of Orange County Choppers, also will be on hand.



GapVax owner Gary Poborsky and Paul Teutul Sr. of Orange County Choppers

PressurePro partners with Velociti

Advantage PressurePro, developer of tire pressure monitoring systems, and TPMS technologies have partnered with Velociti, provider of technology deployment and networking technology products. Velociti will be an official installation provider for PressurePro products.



Federal Signal opens Tacoma rental center

Federal Signal Corp.'s Environmental Solutions Group opened an FS Solutions rental center in Tacoma, Wash. As the ninth FS Solutions rental center, the Lakewood location stocks parts and accessories for waterblasters and tools for specialized cleaning.

Vac2Go names manager, adds to fleet

Vac2Go named Jason Harville Southeast territory manager and added 2014 Guzzler Classics with HXX hydroexcavation packages to its fleet. The trucks, with 28-inch HG blower for wet/dry industrial cleaning, 18-yard debris body, telescoping boom and 600-gallon water tank will service the company's Rock Hill, S.C., Hopewell, Va., and LaGrange, Ky., locations.

GapVax launches anniversary website

GapVax launched its redesigned website, www.gapvax.com, in celebration of its 25th anniversary. The easy-to-navigate site includes equipment, parts and contact information. **C**



THE CABLE CENTER 1-800-257-7209

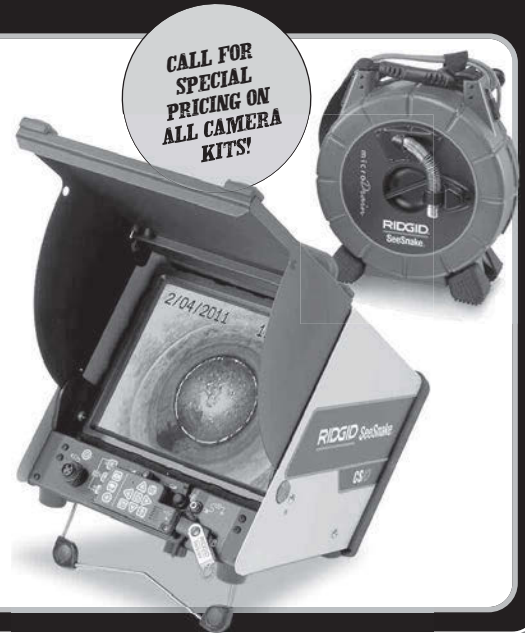
MIDWEST'S LARGEST FACTORY AUTHORIZED
REPAIR CENTER FOR GATORCAM, GEN-EYE & SEESNAKE

24
HOUR
TURNAROUND

FREE
DELIVERY
ON ALL RIDGID
CAMERA
KITS

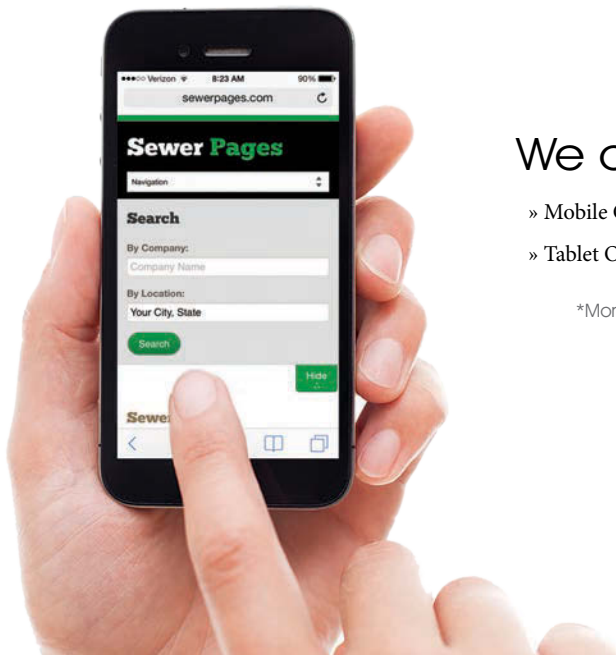
RIDGID's NEW CS10 Digital Recording Monitor

- USB Thumb Drive
- 12.1" Daylight Readable Display
- Multi Mode Recording
take snapshots, record full video & lean video
- Software Integrations
with SeeSnake HQ & RIDGIDConnect™



• THE CABLE CENTER • 8318 OLIVE BLVD. • ST. LOUIS, MO 63132 • 314-993-3099 •

It's 2014. When was the last time someone under the
age of 40 actually used the phone book to **find your business?**



We can build your site ... for **FREE***

- » Mobile Optimized
- » SEO-Friendly
- » Custom URL
- » Tablet Optimized
- » Updates Included
- » Listed at **SewerPages.com**

*Monthly hosting and maintenance fees apply. Starting at only \$59/month.

SewerPages.com

800.257.7222

info@septicpages.com

Powered by:

Cleaner | COLEpublishing

Cleaner Marketplace Advertising



WHEN YOU LET US REPAIR YOUR CAMERA, YOU WILL GET A PERFECT SHOT EVERYTIME

> We service push rod reels, cameras and command modules. We repair most brands.
 > We understand when your equipment is broken, you are losing Big Bucks! We give fast and quality service.

> We are an authorized service center for General Wire, Rotech, Vision and Ridgid.
 > Your equipment is very expensive and we would be happy to supply references on our quality work. Just call Terry or Stan!

Electronic Repair Co. • 205-836-0454 • servicewithasmile.com

Water Jets for rent



- Units from 4,000 to 40,000 psi, including convertibles
- 60-600 hp, diesel or electric
- Rent, buy or lease
- 6 convenient branches: MI, IN, NJ, LA, TX, CA

NLB Corp. 1-877-NLB-7996
www.nlbcorp.com

Advanced Work Horse

Advanced Workhorse nozzles utilize conical ceramic inserts to *Maximize Your Horsepower*

Available through Vacall Toll Free 800-445-4752 or vacallindustries.com

DYE TRACERS

Solutions for:

- Infiltration
- Septic Systems
- Cross Connection
- Leaks and more...

BRIGHT DYES
Division of Kingscote Chemicals

www.brightdyes.com • 1-800-394-0678

Making tools you can count on for 30 years!

7752 Mini Tapping Tool

'The Wedge' Service Line Replacement Tools

'Big Shot' Underground Piercing Tools

Call us toll free: 1-888-737-3668
Or visit us at: www.footagetools.com

Footage

ERICKSON Tank & Pump

WE TAKE TRADES

509.785.2955
CALL FOR UPDATED LIST OF EQUIPMENT
WWW.ERICKSONTANK.COM

Masport®
PUMPS & QUALITY COMPONENTS

800 Rd. P.5 S.W. / Quincy, WA 98848
fax: 509.785.3770
e-mail: sales@ericksontank.com
"TANKS" FOR YOUR BUSINESS!

Cua Claws

A Simple Solution for Slippery PVC Pipe - **The Right Wheels**

We now resurface all makes of steel transport wheels

CALL JERRY AT 714-697-8697
www.cuaclaws.com

The Amazing **ARCTIC BLASTER** Thawing Device

- > Thaws pipes above & below ground
- > Use on plastic, copper or ABS
- > Perfect for roof drains

ARCTIC BLASTERS INC.
SUNDRE, ALBERTA
PH: 403.638.3934

THE "ORIGINAL" LIQUID SMOKE

Turbo Fog M45:

- Versatile
- Light Weight
- Compact
- Creates Dense Smoke

TURBO-FOG Since 1977

www.turbo-fog.com • 1-800-394-0678

CONFINED SPACE ENTRY PACKAGE ONLY \$2,995

- 4-Gas Air Monitor
- 7' Tripod
- 3-Way Fall Protection
- Work Winch
- Full Body Harness

Add a Blower with 15' of duct for only \$350!
Add a 5 Minute Escape Respirator for only \$500!

MTECH 800.362.0240
www.mtechcompany.com

LEE BRICE Live **WEDNESDAY**

INDUSTRY/APPRECIATION PARTY
February 26, 2014 - 5 p.m.

You Can Install Sewer and Water Lines (Without Digging A Trench)

Pipe Genies Do It All!
Ductile & Cast Iron, Clay & Concrete, ABS, PE & PVC

Pipe Genies Pull Any Pipe!
System Power From 20 Tons to 240 Tons!
(Rated for 1/2" - 30" Pipe)

Pipe Genies Work Anywhere!
The Most Compact Systems Available!

We have everything you need to get started making profits with pipe bursting!



www.TrenchlessAmerica.com
Toll Free 1 877 411 7473

Over 25 years of building quality equipment

HotJetUSA®

DRAIN LINE JETTING EQUIPMENT

Most Versatile Jetter On The Market!

• 35 HP Vanguard
• Remote Control
• Cleans Drains from 2"-8"+

On Sale For Only **\$24,995!**

Fully loaded! Call for details!

1-800-213-3272
www.hotjetusa.com

Superior SMOKE

for SEWER TESTING

Superior Smoke Fluid Systems
Smoke Candles • Smoke Blowers

MADE IN USA

Superior Smoke Testing
The Most Cost Effective Method to Find Sources of Surface Inflow

SuperiorSignal.com/Cleaner

DYNAMIC REPAIRS

We Repair:
General Wire, Ratch, RIDGID, Hathorn Corp.
Electric Eel, GatorCams, Vision Intruders
and Vivax Inspection Cameras,
Locators, Command Modules and Cables

New & Refurbished Inspection Equipment For Sale

Rental Equipment Available
Daily & Weekly Rates

Ask About Our 48-Hr. Turn Around Time

INSPECTION CAMERAS ARE OUR ONLY BUSINESS!

973-478-0893

DYNAMIC REPAIRS
40 Arnot St., Unit 20
Lodi, NJ 07644
dynamicablerepairs@yahoo.com
www.dynamicrepairs.net

WWW.PUMPERSHOW.COM

PUMPER & CLEANER ENVIRONMENTAL EXPO INTERNATIONAL

Indianapolis
FEBRUARY 24-27 2014
INDIANA CONVENTION CENTER

REGISTER TODAY!

T&T Tools, Inc.

800.521.6893

CALL for a FREE Catalog

Many styles Available

BOOTH 6000

Insulated Soil Probes (for locating) Heat-Treated Hooks (for covers, lids, etc)

www.mightyprobe.com

Trailer Jetters

Gas or Diesel

More Power per GPM!

AmericanJetter.com
866-9HI-FLOW

NEW & AFFORDABLE

AQUA SAFE SUIT

- UHP Protection
- Comfortable & Flexible

by: **CESCO**

Hose Shrouds

- Operator Protection Against Sudden Hose Leak Failure
- UHP Protective Fabric
- 48" Long Abrasion Sleeve
- Fits All Manufacturers
- Easy Installation

chris@aquamiser.com
1-800-394-4987

Southwood Plumbing & Heating
Cleaner

Every day is Earth Day.™

"When we have a large rain storm there is so much infiltration into the sewer system, sewage treatment plants can be flooded. And if this overflows into the bay you have a problem. There are huge fines for dumping sewage into the bay, and a lot of cities have been going through inspecting and even doing grants for homeowners to upgrade their sewers."

Denis O'Halloran
An Original Environmentalist
President
Southwood Plumbing & Heating
San Bruno, Calif.

www.coleplumbing.com • 800.257.7222
Proudly Serving the Environmental Service Industry Since 1979

Waterblaster Rentals & Sales

Houston, Texas

Boatman Industries

1K to 50K psi
60 hp to 1000 hp
Waterblasters & Accessories
Used Equipment Sales

713-641-6006
www.boatmanind.com

CLEAN OUT PLUG WRENCH

A wrench for nearly every size and style of clean out plug.

SAVE 10%
Use PROMO Code C614

HeavyDutySupplies.com
888-745-7775

BUSINESSES

WWW.ROOTERMAN.COM. Franchises available with low flat fee. New concept. Visit website or call **1-800-700-8062 x26.** (CBM)

For Sale: Well-established sewer & drain cleaning business serving area for over 40 years. Two-truck operation. Loyal customer base. Employee with 15 years experience willing to manage business. Located in Central Indiana. 765-664-4741 (C01)

Existing Valu-Rooter Franchise for sale in Northeast Ohio. Room for growth with great potential. Call 440-309-5024 (C02)

Brooklyn, NY Sewer & Drain Cleaning Business for Sale. Established more than ten years. Great growth potential. For more information, call 917-560-5606. (C01)

Routes now available for the first time. We are looking for motivated owners who are looking to build a business. Includes company leads and complete office support as well as training. An owner operator can earn \$2,000+ per week. Plumbing or mechanical background is helpful. 30K for new territories or 129K for established territory. Contact Bill at 516-785-6600. (C03)

COMPUTER SOFTWARE

FreeServiceReminderSoftware.com, FreeServiceDispatchSoftware.com, FreeRouteManagementSoftware.com. (C12)

DEWATERING

4" Dia-Disk Double Diaphragm Pump: 5hp electric motor. Cost new - \$17,000. Completely rebuilt. Variable flow, 0-200gpm, low-stroke - won't shear polymer. PRICE \$7,500. Pictures are available upon request. Please call 910-738-5311. (CBM)

DRAIN/SEWER CLEANING EQUIPMENT

Used and rebuilt cable machines in stock: RIDGID K-7500, K-40, K-60, K-1500, Spartan #1064, #300, #100, Electric Eel model #C machines. The Cable Center: 800-257-7209. (CBM)



Airrigation Engineering Co. Foamaker HT200 hose thruster, sewer jet. Have run engine, air compressor, and pump. More pictures available. \$4,000 OBO
Ask for Gabe 330-722-1150, OH C01

HAZARDOUS WASTE UNITS

New 3,200 U.S. gallon, carbon steel, DOT certified 407/412 vacuum tank; dump type with full open rear door and Presvac PVB-750 vacuum-pressure pump installed on a 2014 Peterbilt 348 cab and chassis. (Stock #13577A-D) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

JETTERS-TRAILER



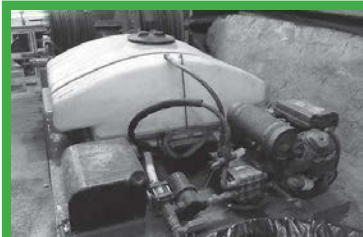
Xtreme Flow Hot/Cold Jetter! Model #HJ2TA8536, tandem axle trailer, 35 hp Vanguard 8.5 gpm @ 3,600 psi, 325-gallon water tank, 300' hose, General Pump. List \$34,995. On sale for \$29,995. Fully loaded!

800-213-3272
www.hotjetusa.com CBM



2000 US Jetting 4014 insulated enclosed trailer unit. 4,000 psi @ 4,000 gpm, 1/2" hose, 1/4" hose reel, 300-gallon water tank, antifreeze tank. \$10,000

570-336-1088, PA
ericsorg@sorg-inc.com C03



2007 Cam Spray TB2511H: 24hp Honda gas motor at 2,500psi with 150-gallon tank. 350 ft. of 3/8 jet hose. 100 ft. garden hose for filling. Good condition. Asking \$3,200

847-514-5737, IL C01

JETTERS-TRUCK

2001 Sreco water jet on an International 4900 tandem axle. 100gpm, 2,000psi pump. 3,000-gallon water tank. 600 feet of jet hose. Was a city-owned unit. Price \$57,500. www.empireequip.com 714-639-8352. (CBM)

Jack Doheny Supplies Inc. offers a full range of late model combo units and DOT industrial vacuum loaders. Call us @1-800-3DOHENY. (CBM)

2006 GMC TC6500 cab and chassis with Pipe Hunter trunk mounted jetting unit, 3,000 psi @ 50 gpm with a 1,000-gallon water tank, rear mounted hose reel with Jet Eye Camera System, **6,800 original miles, like new. \$69,000 sale price.** (Stock #13234V) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

JET VACS



2000 Sterling Vector 2100: CAT motor, 10-speed tandem axle. 1,500-gallon water capacity, 18" Roots blower, 80gpm @ 2,500psi Rodder pump, 15yd debris tank. Ready to work \$80,000

954-782-6752, FL C01

Pre-owned 2002 Sterling LT 9500 cab and chassis with a Clean Earth Safe Jet Vac 1015 Combo Unit. (Stock #3876C) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

Vac-Con V390LHA combination unit with Roots 827 blower, 1999 International Model 2554 cab and chassis. (Stock #3918C) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)



2005 Ford F650: CAT C-7 (210hp); 6-speed; A/C; 26K GVW. Vacmaster VNDS4000 vacuum excavator; JD diesel (155hp); D+W blower; Boss air comp; 450-gallon Spoil tank w/hyd. dump. Stock# 8364; 67,865 miles. \$79,500

800-520-4704 PA C01



2001 Model 2112 Vector: Automatic transmission, 60,000 GVW, 278,306 miles, 12,968 hours. Roots 624 15" PD blower. Telescopic boom, articulated front hose reel, 12-yd. debris tank. 80gpm @ 2,000psi, 1x600 jet hose. \$45,000

708-475-7115, IL C01



Vector 2112, 2004 Sterling: PD blower, cyclone, CAT C12, Eaton 10-speed, 1,000-ft. reel. Recent pump overhaul. \$95,000

mark@cleanserveinc.com
713-725-9047, TX C01



2005 VacCon V312LHA: 3-stage fan, 80gpm/2,000psi pump. 12-yard body, 1,300-gallon water capacity. Sterling 6x4 chassis. Only 24,000 miles, one owner. Runs great. \$110,000

Call John 813-299-0033, FL C01



2005 Freightliner Condor: Vactor 2110 Jet-Vac w/PD blower, ISM Cummins, Allison auto., 46,000 rears, 20,000 f.a., ex-utility company truck. \$79,900
814-696-4343, PA C01

2002 Vac-Con Model V390LHA on Sterling Model LT7501. Three-stage fan with 65 gpm pump at 3,000 psi. Details on www.empireequip.com. \$79,900. 714-639-8352 (CBM)

2002 Vactor Model 2110PD on an International 7400. 61,650 miles. 80gpm, 2,500psi. Roots 824 blower. 600 feet of new jet hose. Was a city-owned unit. Price \$120,000. Pictures at www.empireequip.com. 714-639-8352. (CBM)

2007 Vactor Model 2112 on a Sterling LT7500. 50,876 miles. Two-stage fan. 65gpm, 2000psi pump. Was a city-owned unit. Price \$157,500. Pictures at www.empireequip.com. 714-639-8352. (CBM)

LEASE/FINANCING

North Star Commercial Credit: Commercial loans for trucks or equipment. Flexible purchase programs to fit your budget. 21 years in the industry. Contact **Tom Myers** - **877-804-2274**. (CBM)

LOCATORS

Used Ridgid NaviTrack, Gen-Eye Model 100 and Goldak Model 4400. The Cable Center 800-257-7209. (CBM)

MISCELLANEOUS

Titan 8000 series, high performance, RIDGID 8000 Zero-Gravity. The Cable Center: 800-257-7209. (CBM)

NOZZLES

SAPPHIRE NOZZLES for UHP, laser-etched, heat treated, excellent quality, fantastic savings! 772-286-1218. info@alljetting.com; www.alljetting.com. (CBM)

PARTS & COMPONENTS

US Jetting provides aftermarket rebuilding services and **replacement parts for Harben® pumps**. Low prices, fast response. Why pay more? Call today. 1-800-538-8464, ext 25 or 18. (CBM)

PIPELINE REHABILITATION

One trade-in model of Pipe Genie heavy-duty, pipe bursting equipment. Excellent condition, looks new, 30-ton, 100 feet cable, full 2-year warranty. 877-411-7473. (CBM)

Equipment & Materials for the Cured-In-Pipe Industry – Equipment Rentals – Shooters/Inverters - Prepared Resin Saturated CIPP Liners. www.cipp-services.com www.fastpipelining.com (C05)

POSITIONS AVAILABLE

CCTV OPERATOR/PROJECT MANAGER NEED-ED: Pipeline Inspection Company in Houston, TX has immediate need for individual with at least 3 years of project management experience coupled with knowledge of pipeline inspection and cleaning. PACP certification and field experience on CUES equipment preferred. Must be able to supervise crews, assist estimator in bidding, maintain client relations and handle operational issues. Compensation and benefits based on experience and qualifications. Please email resume to gc@pvicaz.com. (C01)

GapVax, Inc., a nationally recognized manufacturing business, is seeking a talented, highly motivated individual to fill a full-time Sales Position in the Midwest (Iowa based preferred) region. GapVax is the leading manufacturer of industrial and municipal vacuum units and hydroexcavation units in the United States. We provide the most reliable, comprehensive, and efficient mobile vacuum units in the industrial and municipal markets. Specifications of the position are listed on our website, www.gapvax.com, click on the Now Hiring link in the left hand column. Send resumes to Lthomas@gapvax.com or 575 Central Avenue, Johnstown, PA 15902. (CPMGBM)

Gradall Industries, Inc. has an immediate opening for a Territory Sales Manager representing its Vacall product line. Check details on our website, www.Gradall.com or submit resumes to: Gradall Industries, Inc. Attn: HR, 406 Mill Ave. SW, New Philadelphia, Ohio 44663 (telephone: 330-339-2211). We are proud to be an EEO/AA employer. (C01)

SALES POSITION: Manufacturer of high-end sewer nozzles seeks representative for East Coast Region - Virginia to Maine. Easy to sell with good demo. MUST love to travel. Salary plus commission, vehicle, etc. Send resume to resume@nozzteq.com or call 866-620-5915. (CBM)



Municipality Sales Manager needed for leading manufacturer of CIPP materials and equipment. Having extensive knowledge of Cured-In-Place-Pipe systems and installation procedures is a requirement. You must also have prior knowledge of municipality sales with three years prior experience. Competitive salary and residual sales volume already in place. Relocation to our corporate facility in Clearwater/Tampa area will be required. Please call Rob Larsen, US Sales Director at:
727-507-9749 C01

Seeking Experienced Project Management Personnel - Established Nashville area contractor looking to hire prompt, dependable, hard-working project managers for the preparation cleaning, television inspection and trenchless lining rehabilitation of residential service lines and municipal underground pipeline. Must be willing to travel when called upon and retain a good driving record; CDL license preferred. Work can be physically demanding at times. Pay based on past experience and/or personal performance throughout an initial 90-day probationary employment trial period. Enquiries from serious career driven individuals only please. Phone number: 866-284-8279 (C01)

PUMPS

Two (2) 4" Thompson Double Diaphragm Pumps: 5hp electric motor, single phase. Cost new - \$9,000 each. Will sell both for \$5,000 or sell individually for \$3,000 each. Pictures are available upon request. Please call 910-738-5311. (CBM)

Buy & Sell all makes and models, **new & used** vacuum pumps & high pressure water pumps, and good used replacement parts. Call for an inventory sheet and save. **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648)**. (CBM)

Honda model WP40X, 8 hp, 4" with hoses. Honda 4 hp, 2" pump with hoses. The Cable Center: 800-257-7209. (CBM)

New, never used Myers D65-20 water pump. List price: \$17,992. Sell for \$9,750. New Rockford power take-off part number 4-11182 - \$700. 714-381-4141. (CBM)

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jetters. All available for daily, weekly, monthly, and yearly rentals. **VSI Rentals, LLC, (888)VAC-UNIT (822-8648) www.vsirentalsllc.com**. (CBM)

SEPTIC TRUCKS

Under CDL 2005 Kenworth T300: 260hp Cummins, 1,800-gallon tank, Masport 400 pump. 118,000 miles, one owner. \$52,000. 765-744-8789. Indiana. (C01)

SERVICE/REPAIR

Dynamic Repairs - Inspection Camera Repairs: 48 hour turn-around time. General Wire, Ratech, RIDGID, Electric Eel Mfg, Gator Cams, Insight Vision, Vision Intruders. Quality service on all brands. **Rental equipment available.** For more info call Jack at 973-478-0893. Lodi, New Jersey. (CBM)

Cleaner
 AVERAGE
 MONTHLY
 CIRCULATION
 REACHES
27,756
 READERS!

SERVICE/REPAIR

www.servicewithasmile.com Sewer Cam Reel and Camera Repair: Authorized for General Wire, Rotech, Vision & Ridgid. Quality service on all brands. Need more info? Just call Terry or Stan. Electronic Repair Co., Birmingham, AL 35206. 205-836-0454; email: repair@servicewithasmile.com. (CBM)

TOOLS

T&T Tools: Probes, hooks. Probes feature steel shafts with threaded and hardened tips. The insulated **Mighty Probe™** tested to 50,000 volts. **Top Poppers™** open manhole covers easily. Free catalog. **www.Tandttools.com.** Phone 800-521-6893. (CBM)

Ritchie Yellow Jacket Recovery System & BULLET 7 cfm pump. The Cable Center: 800-257-7209. (CBM)

Bosch Brute hammer drill with cart irons. The Cable Center: 800-257-7209. (CBM)

RIDGID model #300 with stand, RIDGID tri-stand vises, RP 330 ProPress kit. The Cable Center: 800-257-7209. (CBM)

TRAILERS- VACUUM/TANKER

4,000-gallon Lely Self-Contained Vac/Press Tanker: Isuzu motor, Fruitland RCF 500 vacuum pump, Evans tri-axle trailer with aluminum wheels. Excellent condition - \$27,500. Pictures are available upon request. Please call 910-738-5311. (CBM)

TV INSPECTION

CUES inspection truck. 1997 Chevy 3500, CUES Pro-Data DVD software, OZII camera - pan and tilt, optical zoom. Ultra shorty transporter. \$30,000. 319-759-7774 (C01)

New, never-been-used Aries TR3300 Pathfinder pan & tilt camera system. 6" steerable self-propelled tractor, 20" down-rigger assembly, Saturn III HV color case unit video/keyboard/control module/DVD/VCR. Matches pipe contour, power forward/reverse, steer-left/right, superior maneuverability. Continuous-duty drive motors, 6" re-lined to 24" sewer lines. 512Hz detachable locating beacon. Rear-viewing camera quick retrieval - up to 200'/min. \$45,000 OBO. 925-784-0330 (CBM)

Aries dual mode thermal imaging pan & tilt color 360-degree continuous rotation sewer camera. Infrared mode finds hidden sewer laterals behind pipe liner. Pinpoint hidden lateral connections. \$25,000 OBO. 925-784-0330. (CBM)

Envirosight Inspection System: 1998 Rover 125 crawler, RC90, extra wheels, auxiliary lights, pan/tilt camera and riser. Mounted on 1990 Chevrolet van, V8 engine with 22,000 miles. Includes built-in office/work area. Call 800-832-6417 or visit www.macqueeneq.com for photos. (C02)

1999 Ford E350 Cube Van with 2011 CUES lateral launch, Lamp One inspection unit. Honda generator, 6,000 watt. \$78,000. 651-334-4446 (C02)

WINTER SALE!!! 1999 Chevy 3500 Camera TV Inspection Van: UEMSI Camera system with tractor. Pan/Tilt. Honda generator. Quigley 4x4. A/C equipped. 52,974 miles. Good condition. Ready to work. \$20,000. Call Bill: 606-682-1690 (C01)

CUES Inspector General portable inspection system. OZ II camera with pan & tilt & zoom. Ultra shorty 21 transporter. Upper manhole roller, downhole roller, 4 snap together poles. Prototek FV series 512hz battery power transmitter. Always owner operated. Only 86 hours of use. \$32,000. 803-768-2028. (C02) MAINLINER Buying & Selling Used Equipment. CANADA & USA PEARPOINT MAINLINE EQUIPMENT ONLY. Will buy complete Pearpoint trucks. Will buy your old system. Do you need used parts? 399, 599 Reels; 420, 448 Tractors; 494 Digital and Zoom 420 light heads. Call: 1-800-265-4298 or mainliner2075@hotmail.com (C03)

Used and rebuilt camera kits in stock: RIDGID Mini Compact, Mini Color, Standard Self-Leveling, General Gen-Eye I, II and III, Aries Seeker, and SRECO kits. The Cable Center: 800-257-7209. (CBM)

CUES K2 SYSTEM: Steerable Compact Pipe Ranger (CPR), OZ3 camera, 1000' gold cable, auto cable reel, CPU, CCU, wireless controllers, six different wheel sets, two different wheel spacer sets, tool and manual. Like new (app. 40 hours) at 20% off list. Call 866-936-8476 or emailoffice@envirosight.com.(CBM)

1998 CUES Mainline TV System: GMC Savanna 3500, CUES with Pro-Data on-screen titler, Honda generator, Sony combo DVD/VHS, 1,700' of M/C cable, pan & tilt camera with shorty transporter. \$29,500. 608-835-7767, WI. (CBM)

If you are using an

800 NUMBER

in your ad, be sure it can be used in all areas nationwide.

VACUUM EQUIPMENT



2003 Vac-Con Model#: V350/850LHA. Call for pricing.

803-358-0221 SC C01

VACUUM LOADERS

2010 Vacall ATR1213, 12-yard debris body, 1,300 U.S. gallon water, Hydroexcavation machine mounted on a 2009 Sterling LT-9513 with a Hibon SIAV 8702 tri-lobe blower - 5,300 cfm. (Stock #2151V) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (CBM)

WANTED

Wanted to Buy: Vactor 2100's and late model Guzzlers. Cash. 800-336-4369. (CBM)

WATERBLASTING

Gardner Denver T-375M: Bare Shaft pump. Gardner Denver T450M Bare Shaft pump NLB 20-200: 12 gpm @ 20,000 psi. Gardner Denver LC-1500: 390 gpm max, 15,000 psi max. NLB 36-200 6 gpm @ 36,000 psi. HT-150S 25 gpm max 10,000 psi max, Shell Side Machine, Wheatley 165: 30 gpm @ 10,000 psi, Wheatley 165: 17 gpm @ 20,000 psi. Wheatley 125 with aluminum bronze fluid end. Boatman Ind. 713-641-6006. View @ www.boatmanind.com. (CBM)

WATER JETTING EQUIPMENT: We sell, repair and retrofit water blasters. Visit us at: www.waterjettingequipment.com or phone 714-259-7700. (CBM)

40,000 psi Sapphire Nozzles, UHP hoses & replacement parts. Excellent quality & prices. 772-286-1218, info@alljetting.com, www.alljetting.com. (CBM)

It's *Quick* and *Secure!*

www.cleaner.com

SUBMIT YOUR CLASSIFIED AD NOW!!

Just click on "Classifieds" — "Place a Classified Ad"
Fill in the online form!

The screenshot shows the Cleaner.com website interface. The 'Classifieds' link in the top navigation bar is circled in red. A red arrow points from this link to a 'Place a Classified Ad' button in the 'Classifieds' section of the page. Below the button, there are several classified ads, including one for a 2008 Ford with Cyclops and another for a 2009 Sterling LT-9513.

PLACE YOUR AD ONLINE AT www.cleaner.com - IT'S ALWAYS THERE TO MEET YOUR BUSY SCHEDULE

Quick-Easy-Secure
subscribe online at
www.cleaner.com

What you learn
on these pages
could be worth

\$1,000s.

It's all yours - FREE!

That's right. Some 25,000 of your industry peers welcome **Cleaner** for the value it brings to their business. Each issue shows you:

- The latest products and technologies
- Innovative work practices from contractors
- Tough jobs resolved with creative solutions
- Business basics for any company
- And much more!

Best of all, you'll learn from other successful business owners how they did it, and how you can, too.

**Don't miss an issue
subscribe today!**

Cleaner

Start my *FREE subscription to Cleaner Magazine.** (*U.S. subscriptions only.)

Signature *(required)* _____

Date _____

Print Name _____

Company Name _____

Mailing Address _____

City _____

State _____ Zip _____

Phone _____ Fax _____

E-Mail _____

Also send a *FREE subscription to:** (*U.S. subscriptions only.)

Coworker's Name _____

Title _____

Coworker's Name _____

Title _____

WHAT IS YOUR COMPANY'S PRIMARY SERVICE? (check only one)

- Cleaning - Industrial/Waterblasting Dealer/Distributor/Manufacturer
 Government/Municipal Hydroexcavation
 Indust./Comm./Mun. Services Location/Leak Detection
 Plumbing/Heating/Cooling Rehabilitation/Relining/Bursting
 TV/Video Inspection Sewer/Drain Cleaning

WHAT IS THE APPROXIMATE POPULATION OF THE AREA IN WHICH YOU PROVIDE SERVICE?

- 0-10,000 10,001-50,000 50,001-100,000
 100,001-200,000 200,001-500,000 500,001+

WHAT IS YOUR ANNUAL EQUIPMENT BUDGET?

- 0-50,000 51,000-75,000 75,001-150,000
 150,001-250,000 250,001-350,000 350,000+

HOW MANY VEHICLES DO YOU CURRENTLY HAVE IN SERVICE?

- 1-5 6-10 11-15 16-20 21+

HOW MANY EMPLOYEES DO YOU SUPERVISE OR WORK WITH AT YOUR FACILITY?

- 1-3 4-6 7-9 10-12 13-15 16+

APPROXIMATELY HOW MANY SEPTIC SYSTEMS DOES YOUR COMPANY SERVICE PER MONTH?

- 1-300 301-600 601-900 901-1200 1201+

FAX this form to 715.546.3786

MAIL this form to

COLE Publishing, P.O. Box 220, Three Lakes, WI 54562-0220

PHONE 800.257.7222

SUBSCRIBE ONLINE at www.cleaner.com



Pressure Washers, Replacement Engines, Pumps, Parts & Accessories



WaterCannon.com

30
YEARS OF
SERVICE

1.800.333.WASH (9274)



Industry Trained Staff

available from 8:30 a.m. to 9:00 p.m. weekdays E.S.T.

Orlando | Phoenix | Minneapolis | Hattiesburg | Melbourne | Toronto | Bogota
International: 1-321-800-5763 ext.115

888-442-7829



GapVax®

CUSTOM BUILDING THE BEST EQUIPMENT ON THE MARKET

TEAM
GapVax



WWW.GAPVAX.COM



So many new things at the Pumper Show this year for us, our New HV Series Advanced Hydro Excavator; we are doing a live demo; and did we mention our Orange County Chopper will be on display?!



BOOTH 6004

Celebrating
25 Years
1989-2014



A SIGHT TO BEHOLD.



SPARTAN
FOR TOUGH CUSTOMERS.
SINCE 1943

The future is at your fingertips with Sparvision 200, a state-of-the-art pipe-inspection camera designed with you in mind. Featuring a wireless retina-display iPad® 4 as its screen, the Sparvision 200 offers full tablet computer features like instant snapshots, on-screen drawing and a touch keyboard for captions. With the Wi-Fi-enabled iPad, simply send the photo or video you shot directly to the customer and store your copy right on the tablet. The Sparvision 200 offers a self-leveling color camera, a 512 Hz locating beacon and a 200' high-efficiency, super-slick push rod. Plus, the entire unit is powered in the field with an on-board battery so you can take it anywhere. **If you're looking for the best, look no further.**

CONTACT US TODAY | 800.435.3866 | SPARTANTOOL.COM