

MUNICIPAL

SEWER

&

WATER™

FOR SANITARY, STORM AND WATER

February 2009

HUMAN SIDE: ENHANCING SAFETY BY CHANGING A CULTURE
PAGE 74

A COOPERATIVE APPROACH TO COLLECTION SYSTEMS TRAINING
PAGE 62

TECHNOLOGY TEST DRIVE: K2 BASE STATION FROM CUES INC.
PAGE 58

Louisville '09
YOUR PLACE. YOUR TIME.

FEBRUARY 25-28, 2009

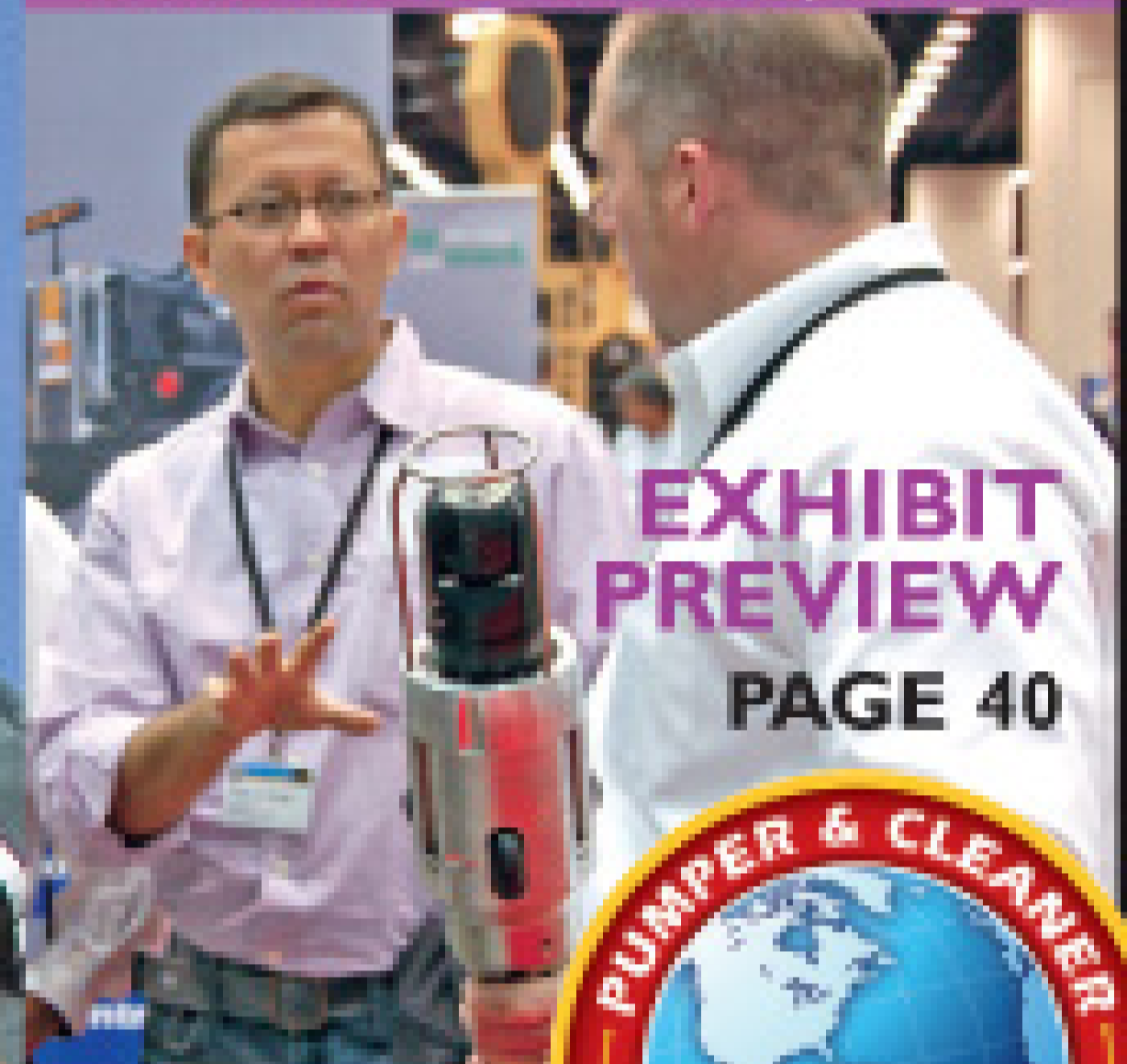


EXHIBIT
PREVIEW
PAGE 40



CREATIVE COMPLIANCE

Oakland's stormwater programs fulfill regulations and protect quality of life
PAGE 16

COLE PUBLISHING INC.
1720 MAPLE LAKE DAM RD.
PO BOX 220
THREE LAKES WI 54562

CHANGE SERVICE REQUESTED

PRSTD STD
U.S. POSTAGE
PAID
PERMIT NO. 659
Bolingbrook, IL

NEW:

QUICKVIEW^{3.5}

- ▶ 65% More Illumination
- ▶ 100% More Zoom
- ▶ Better Range, Sharper Image, Larger Pipe Capability

See for Yourself.

Underground Inspection Made Quick, Affordable & Safe.

Inspect pipelines, manholes and tanks from street level with the patented QuickView zoom inspection camera. Municipalities use it to identify and prioritize maintenance issues. DOTs use it to assess culvert and storm pipe condition with minimal traffic exposure. Contractors use it to survey pipe before bidding, and to document completed work. With newly increased optical zoom, advanced software and HID lamps, QuickView sees 50–350' in 6–60" diameter lines.



45-60 FT

Onscreen Distance Measurement

“My crews verify pipe condition without confined space entry. With QuickView, they accomplish more footage in a safer manner, without full-blown crawler inspection.”

—Steve Kynerd, Sr. Transportation Supervisor, Hillsborough County, FL

- Easiest to use (joystick controls, onscreen menus, lightweight carbon fiber pole and operator vest).
- Greatest range (up to 250').
- Only stabilizer with integral view centering.
- Only system that measures target distance, pipe diameter, and manhole depth/diameter (see right).



OWNER ADVANTAGE

- ▶ \$1000 EnviroSight Credit with Purchase†
- ▶ Largest Network of Svc./Training Centers Across North America

QUICKVIEW[®]

Root Intrusion



Severe Offsets



Gushing Infiltration



Fence Post Breach



Buildup



The QuickView and EnviroSight names and logos are trademarks of EnviroSight, LLC. ©2006 EnviroSight, LLC. All rights reserved. QuickView carries patent no. 6,538,732 and 7,009,899. Other patents pending. †Credit applicable only to ROWER, SuperVision, DigiSewer QuickView and VeriSight. Offer expires 1/1/09.

www.envirosight.com • (866) 936-8476 • fax (973) 252-1176
Headquarters: Randolph, New Jersey • Sales & Service Offices Worldwide

EnviroSight^{LLC}
SPECIALISTS IN PIPELINE INSPECTION



Because blind lateral lining bids can put you in a bind...



Dear Engineers and Collection System Managers,

Lateral lining is the next challenge for municipalities in their drive to reduce I and I.

The problem is that **laterals come in all shapes, sizes and specs...** some with clean outs, some without...some with bends, some straight...some with live infiltration...the list is endless. Throw all these combinations and permutations together and you end up with over 1000 different possibilities.

The problem is further complicated because at the bid stage, information about every single lateral is rarely available and you and your contractor are bidding "blind" to some extent.

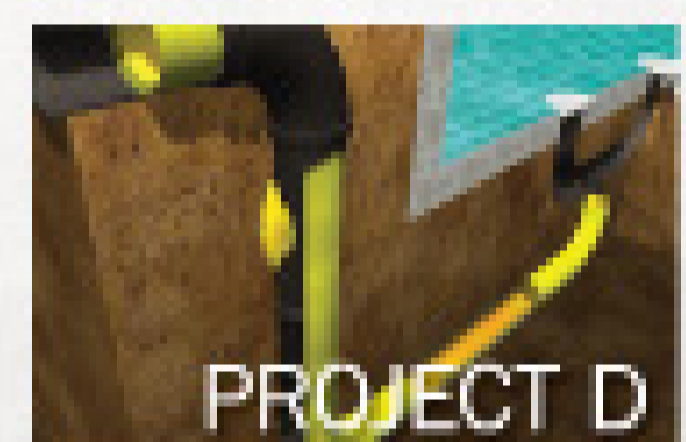
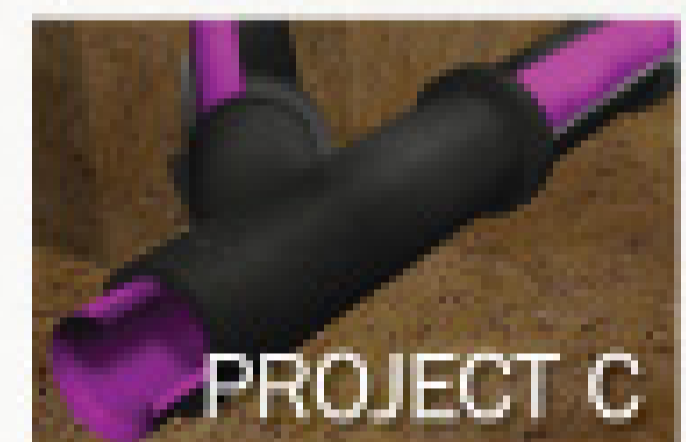
Mathematically it is virtually impossible for any one system to deal with all the variables, resulting in potentially specing a job that no one is able to complete.

How do you get out of this bind?

Employ a contractor with sufficient "tools" to deal with just about any eventuality.

No different to a plumber with multiple wrench types, an Easy Liner Installer can bid with the knowledge that he has over 10 different processes for getting the job done. He might be blind but he is not bound by just one method.

So before you spec your next lining rehab project, release the ties that bind you and limit the unknowns that blind you. Call Easy Liner, the world's largest single resource of multiple lateral lining materials, technologies and 10 million feet of real world experience necessary to handle all the twists and turns that lateral lining can throw at you.



L. Osi

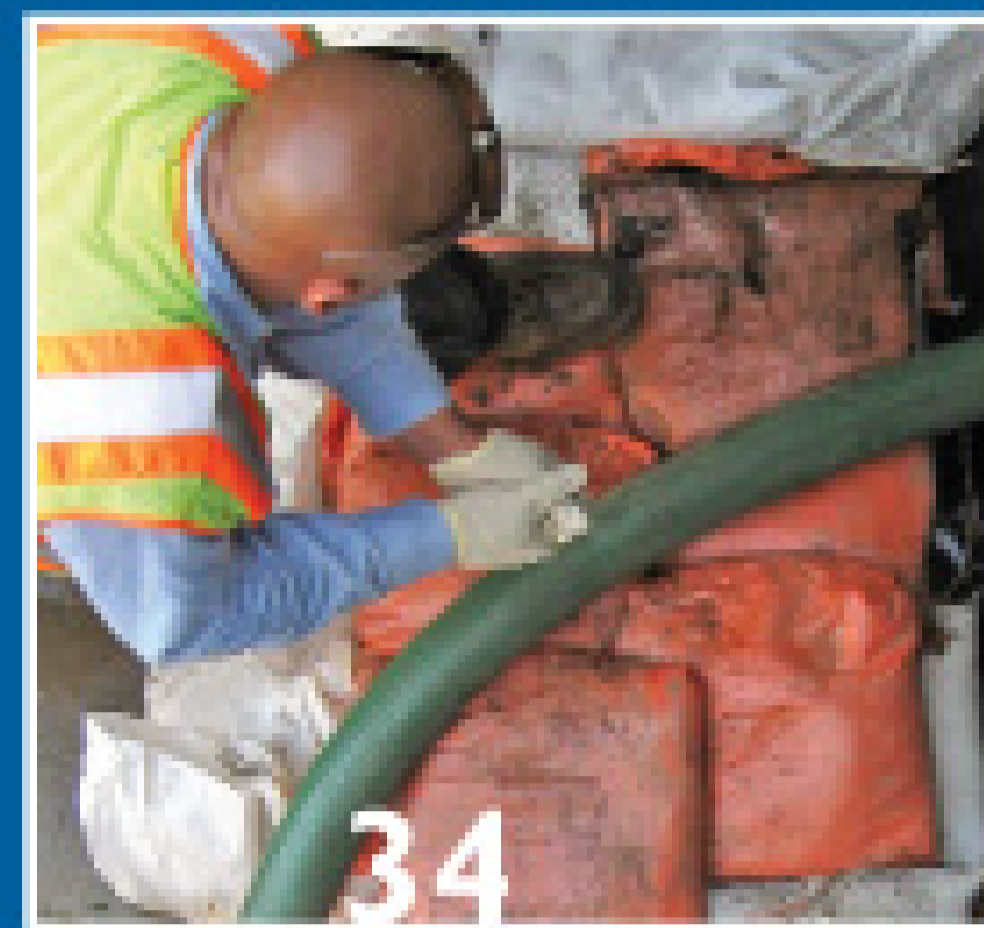
L. Osi, Founder
Easy Liner, LLC



Toll Free: 888-639-7717
info@easy-liner.com
www.easy-liner.com

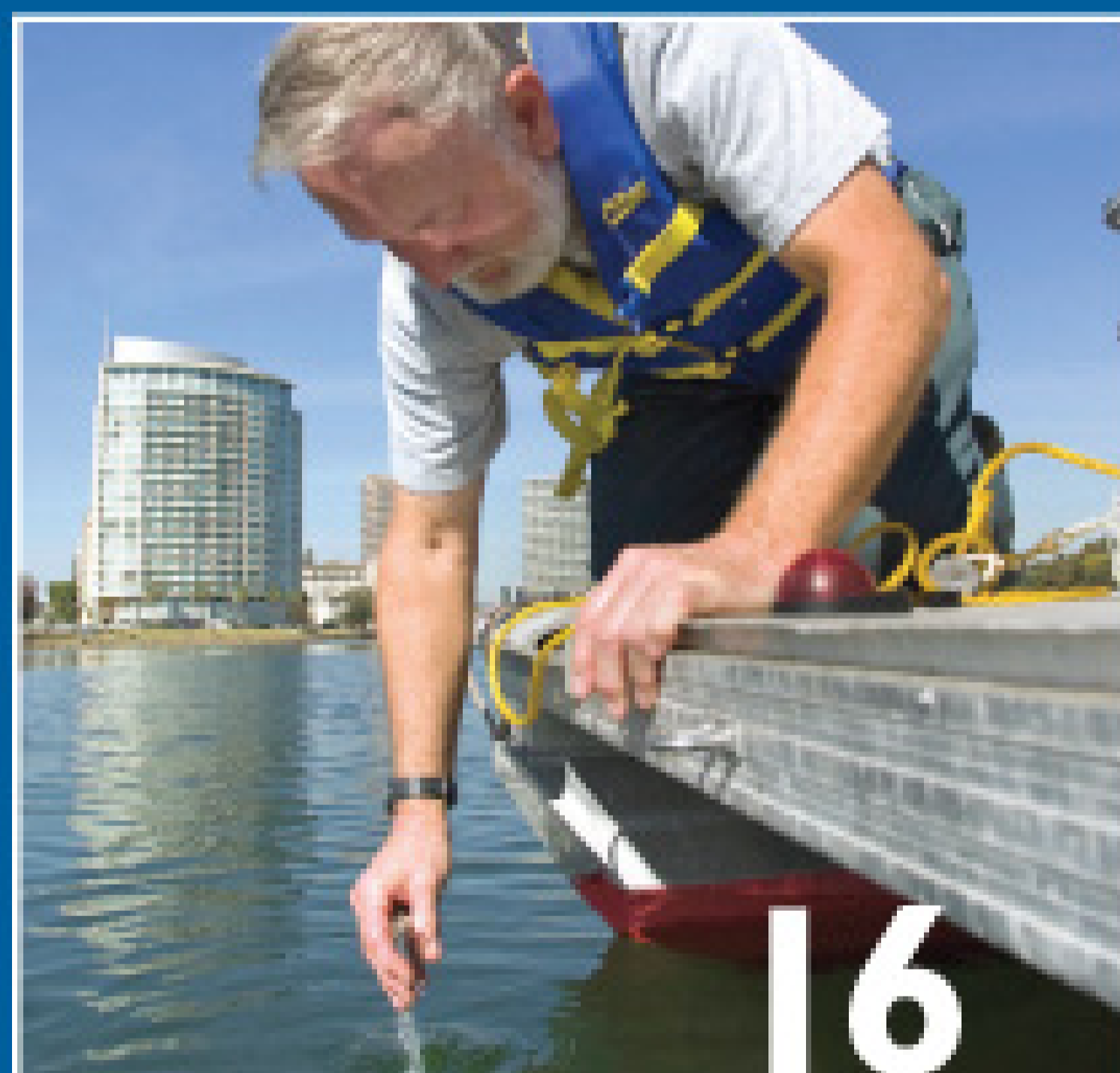
INSIDE:

2009 EXPO PRE-SHOW ISSUE/EXHIBIT PREVIEW



COVER:

The City of Oakland takes a creative approach to preventing stormwater pollution and complying with its NPDES permit. Here, Richard Bailey collects samples for salinity and dissolved oxygen tests on Lake Merritt. Bailey works for one of the local non-profit organizations that has partnered with the City of Oakland to help maintain local water quality. (Photography by Lezlie Sterling)



COMING IN MARCH 2009

2009 Pumper & Cleaner Environmental Expo Show Issue

- ◆ Sewer: CMOM program in Haines City, Fla.
- ◆ Sewer/Water: Combined sewer separation in Lansing, Mich.
- ◆ Storm: A collaborative approach in Chittenden County, Vt.
- ◆ Human Side: Efficiency initiatives in Anne Arundel County, Md.

FEATURES

16 STORM: Creative Compliance

The City of Oakland achieves full NPDES Phase II compliance with award-winning innovations to improve environmental aesthetics and enhance the quality of life.

By Dan Heim

26 WATER: Spokes in a Wheel

A proactive five-point program helps the City of Mankato operate a reliable water distribution system and keep water losses to a minimum.

By Suzan Marie Chin

34 SEWER: Strike Force

Emergency overflow response in the Sanitation Districts of L.A. County focuses on control and confinement. Speed and organization are critical.

By Jim Force

40 PUMPER & CLEANER ENVIRONMENTAL EXPO EXHIBIT PREVIEW: See It All!

Exhibitors offer a hands-on look at the latest services and technology.

By Ed Wodalski

50 BETTER MOUSETRAPS: Wholesale Change

A pipeline data model enables an Illinois water commission to map its distribution system and improve its management.

By Jessica Wyland

58 TECHNOLOGY TEST DRIVE: Think Inside the Box

A mobile base station for pipe inspection from CUES Inc. provides wide flexibility for varied site conditions and for different operating needs.

By Gil Longwell

62 Access for Everyone

A California committee helps make sure that wastewater agencies of all sizes get quality training in collection system operation and maintenance.

By Jim Aanderud

COLUMNS

10 FROM THE EDITOR: Look Who Backs Government Spending

Is it possible that supporters of increased public expenditures include people who are not socialists, do-gooders, government workers and freeloaders?

By Ted J. Rulseh

54 Industry News

56 NASSCO CORNER: Stop the Negative Selling

Salespeople and engineers must trade only in fair and honest information when discussing trenchless technologies for specific applications.

By Irvin Gemora

74 THE HUMAN SIDE: Changing a Culture

A renewed emphasis on safety helps a South Carolina water and sewer authority achieve dramatic improvements in performance.

By Ken Wysocky

76 Association News / Calendar

FEBRUARY 2009

MUNICIPAL
SEWER
&
WATER

"The Standard of the Industry"



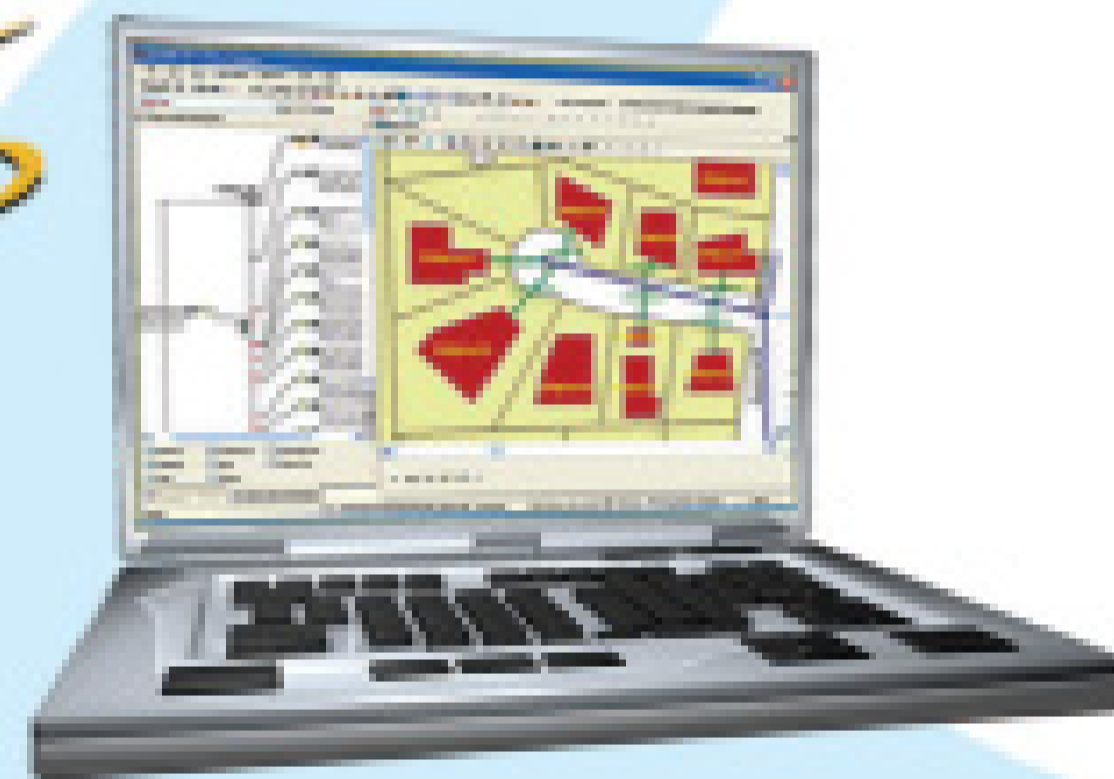
K2 Series Portable Inspection System

Pipeline Inspection & Condition Assessment Solutions

For over 44 years, CUES has provided rugged, reliable, and user friendly systems for pipe inspection, pipe rehabilitation, pipe profiling, and decision support for asset prioritization. Increase your productivity and decrease your downtime. We have the equipment you need and the service to back it up!

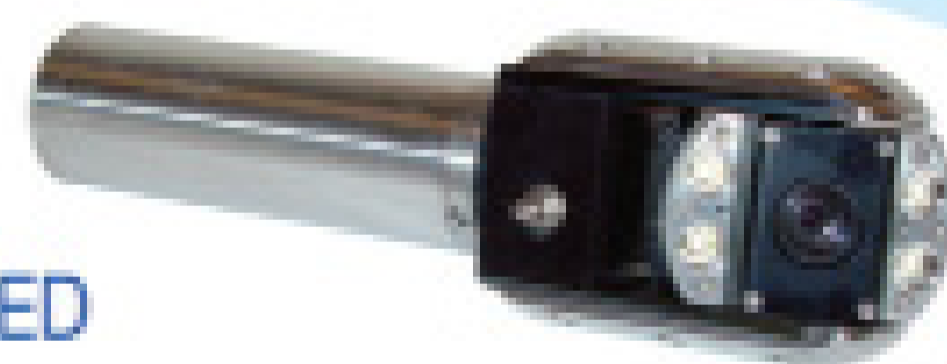


Integrate data seamlessly with enterprise asset-management systems, such as Hansen, Azteca's CityWorks, Maximo, GBA's Master Series, and GIS mapping systems such as ESRI and more.

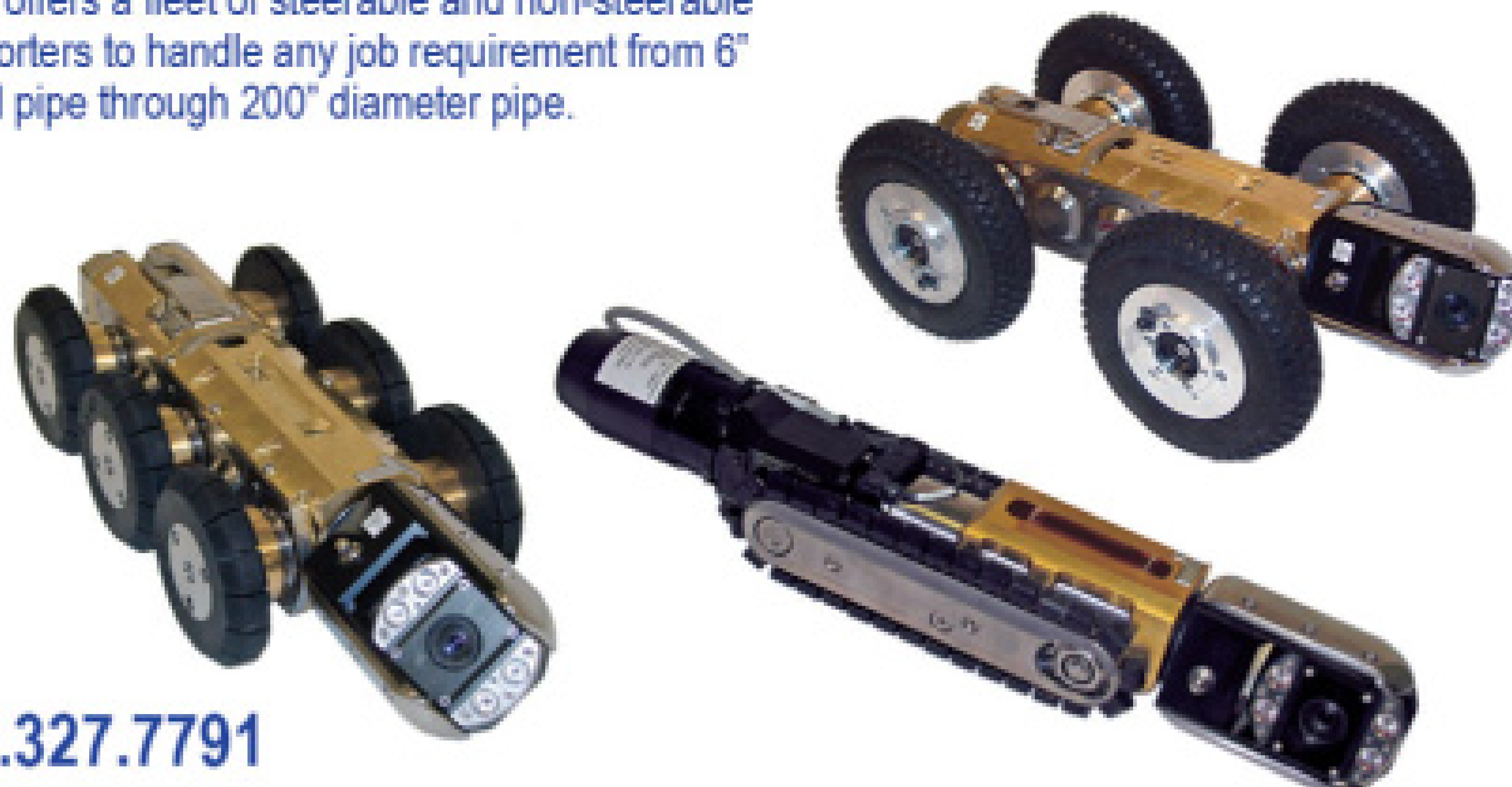


Trucks, vans, ATVs and trailer-mounted systems can be modified to include the equipment you need!

CUES offers a variety of inspection cameras to fit every application from compact mini cameras to the latest technology that includes pan and tilt optical zooming capabilities with built in directional White LED lighting.



CUES offers a fleet of steerable and non-steerable transporters to handle any job requirement from 6" relined pipe through 200" diameter pipe.







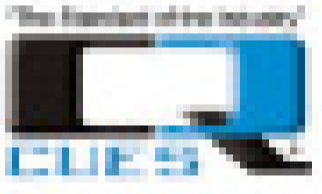



CUES truck-mounted systems can include TV inspection equipment for sewer, storm, and potable water lines, mainline joint and lateral sealing, and lateral reinstatement cutters for the relining industry.






800.327.7791
www.cuesinc.com
salesinfo@cuesinc.com



Visit Us!
Booth 1068

ADVERTISER INDEX

COMPANY	PAGE
A	
Advanced Infrastructure	8
Allan J. Coleman Co.	24
 American Highway Products	48
AP/M Permaform	48
Applied Felts, Inc.	19
 Aries Industries, Inc.	23
C	
Cam Spray	37
Central Oklahoma Winnelson	14
Chempace Corporation	22
Chempure Products Corp.	29
 Cloverleaf Tool Co.	22
 Cobra Technologies	29
 CUES, Inc.	5
D	
Doug Meadows Co. LLC	51
Dunham & Morrow Inc.	13
E	
E.H. Wachs Company	7
 Easy Liner, LLC	3
 Environmental Products & Access.	20
 Envirosight LLC	2

COMPANY	PAGE
F	
FamHost Hosted Business Systems	52
G	
GapVax Incorporated	25
H	
Hi-Vac Corp./Aquatech	61
K	
KEG Technologies, Inc.	30
L	
Lindhorst Workhorse Nozzles	37
M	
MAX-LIFE Mfg.	33
Mr. Manhole Systems	8
Municipal Sales, Inc.	75
MyTana Mfg. Company, Inc.	32
N	
 NozzTeq, Inc.	19
P	
 Pearpoint / Radiodetection	49
 Perma-Liner Industries, Inc.	9
 Petersen Products Co.	51
PipeHunter	15
PipeLogix, Inc.	53
PipeTech Software	38
POSM Direct	31
 Prototek Corp.	30
R	
RapidView IBAK North	57
Reline America, Inc.	11

COMPANY	PAGE
 RootX Root Control Corp.	78
 RS Technical Services, Inc.	31
S	
Savatech Corp.	24
 Sewer Equip. Co. of America	80
Sewer Equip. Co. of Florida	38
 Shamrock Pipe Tools, Inc.	20
SRECO-FLEXIBLE, Inc.	39
Stephen's Technologies	55
Sto-Away Power Cranes, Inc.	13
 StoneAge, Inc.	12, 13
Super Products LLC	21
 Superior Signal Co., Inc.	37
T	
 T&T Tools, Inc.	52
U	
USABlueBook	14
USB-Sewer Equipment Corporation	8
V	
Vac-Con, Inc.	79
Vacuum Truck Rentals LLC	12
Vaporooter	32
Classifieds	70
Marketplace	72
Truck Stop	77

MUNICIPAL SEWER & WATER

FOR SANITARY, STORM AND WATER SYSTEM MAINTENANCE PROFESSIONALS

Published monthly by:

 COLEpublishing

1720 Maple Lake Dam Rd., PO Box 220
Three Lakes WI 54562

www.mswmag.com

© Copyright 2009, COLE Publishing Inc.
No part may be reproduced without permission of publisher.

In U.S. or Canada call toll-free 800-257-7222
Elsewhere call 715-546-3346
E-mail: info@mswmag.com
Web site: www.mswmag.com
Fax: 715-546-3786

Office hours Mon.-Fri., 7:30 a.m. - 5 p.m. CST

SUBSCRIPTION INFORMATION: A one year (12 issue) subscription to *Municipal Sewer & Water* in the United States and Canada is free to qualified subscribers. A qualified subscriber is any individual or company in the United States or Canada that maintains, manages, designs or installs municipal or commercial sewer, water and storm infrastructures. Subscriptions to all other foreign countries cost \$80 per year. Non-qualified subscriptions are available at a cost of \$60 per year in the United States and \$120 per year outside of the United States. To qualify, return the Free Subscription card attached to each issue, visit www.mswmag.com, or call 800-257-7222.

CLASSIFIED ADVERTISING: Rate: \$1 per word, per month. Minimum of 20 words or \$20. All classified advertising must be paid in advance. DEADLINE: Classified ads 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 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: Call 800-994-7990 and ask for Kim, Jim, Winnie or Phil. Publisher reserves the right to reject advertising which in its opinion is misleading, unfair or incompatible with the character of the publication.

EDITORIAL CORRESPONDENCE: Address all editorial correspondence to Editor, *Municipal Sewer & Water*, PO. Box 220, Three Lakes, WI, 54562.

CIRCULATION: 2008 average circulation was 35,769 copies per month (U.S. and international distribution).



PUMPER & CLEANER ENVIRONMENTAL EXPO INTERNATIONAL


www.pumpershow.com

Education Day: Feb. 25, 2009

Exhibits Open: Feb. 26-28, 2009

Kentucky Exposition Center, Louisville, Kentucky

To receive FREE product or service information

from advertisers in *Municipal Sewer & Water*, write the Reader Reply Number appearing in each advertisement  on the attached Reader Reply card in this issue.



A subscription to *Municipal Sewer & Water* is FREE to qualified industry professionals

To subscribe, return the attached Free Subscription card in this issue, subscribe online at www.mswmag.com or call 800-257-7222.

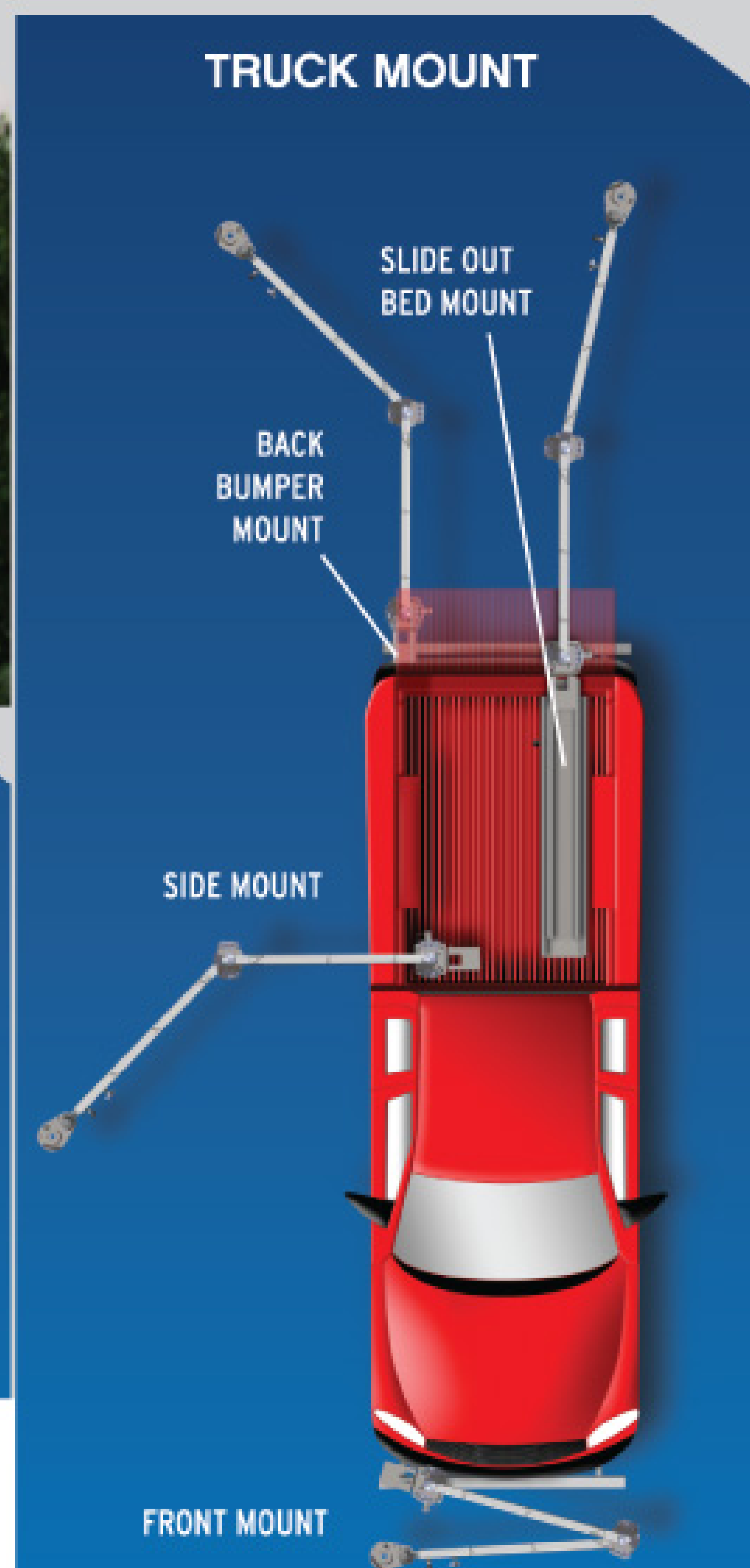
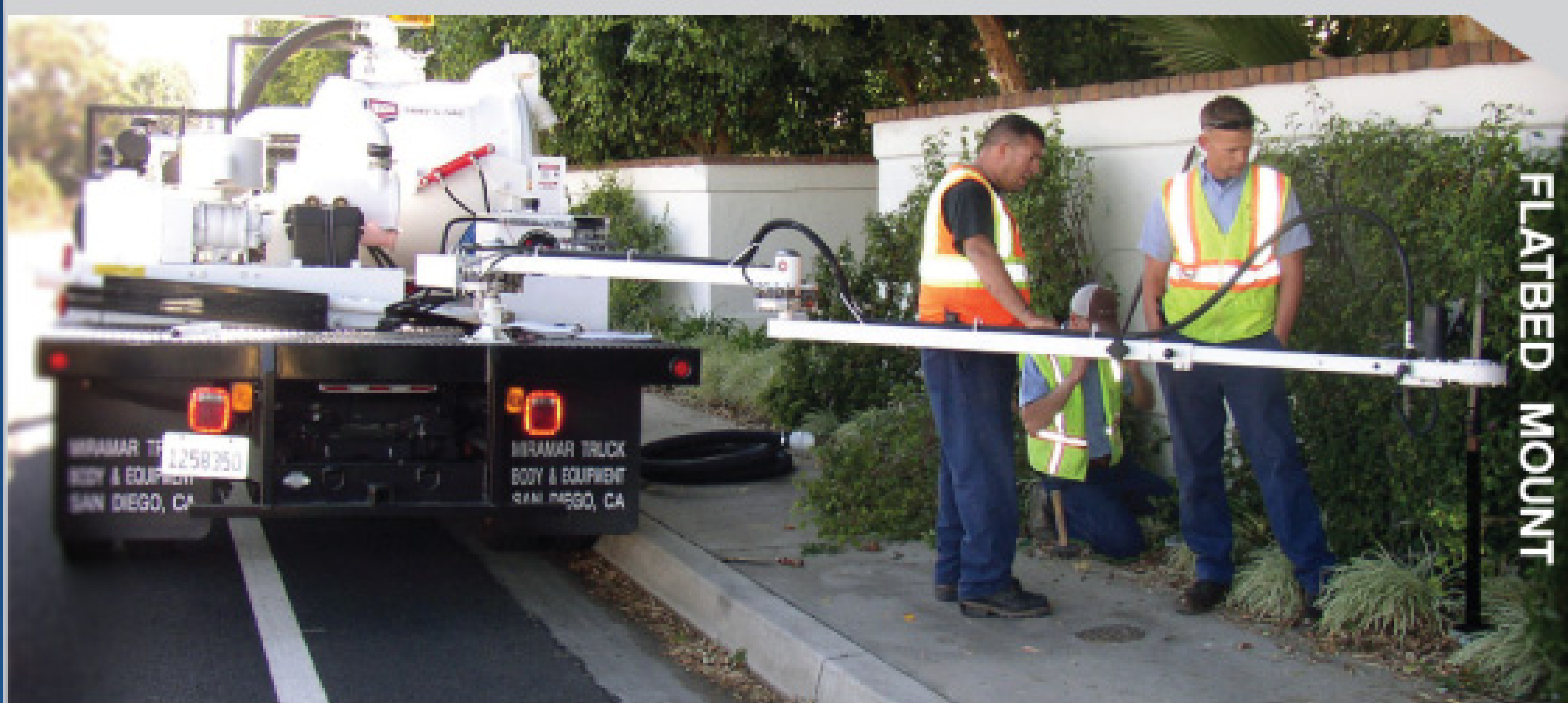
Any Way You Want It!

**The best valve turning equipment
in the industry now comes on a
trailer or on your truck.**

Wachs equipment will automatically use "Reverse & Turn" technology to exercise and protect your valves. Set your limits, step back and watch our patented automation use the minimum amount of torque needed to turn the valve. If there's a problem we will automatically shut down before there's any damage!

It all works because of VITALS Software. Track and log "health" and data about your valves.

- Valve type
- Open/close & right hand/left hand
- Torque requirements and histories



E.H. WACHS COMPANY
Superior Equipment. Complete Support.
+1.847.537.8800 | www.wachsco.com

307



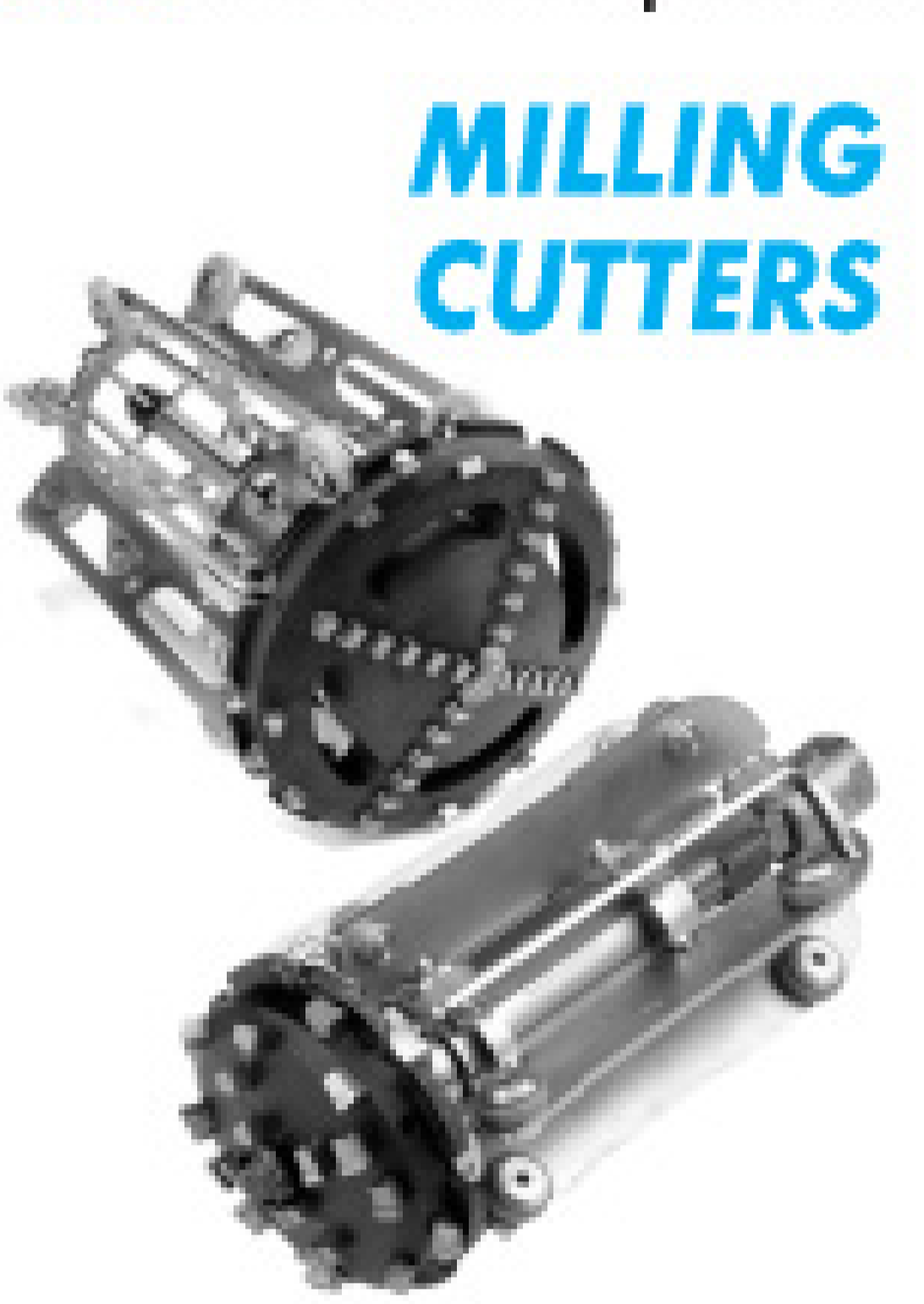
BOOTH # 4026
Feb. 26-28, 2009
Louisville, Kentucky



High Quality SEWER CLEANING EQUIPMENT

Your JETTER comes to LIFE with our UNRIVALED EQUIPMENT!

USB-SEWER EQUIPMENT CORPORATION proudly DEVELOPS and DISTRIBUTES innovative, unrivaled sewer cleaning equipment, precision manufactured in Germany and The Principality of Liechtenstein to the highest technical standards. These products are leaders in the industry and include **NOZZLES, TURBO CHAIN CUTTERS, MILLING CUTTERS, SPECIALTY TOOLS** and **ACCESSORIES** for the municipal and industrial markets.



Visit Us in Louisville!



FOR A DISTRIBUTOR NEAR YOU, PLEASE CONTACT:

USB-Sewer Equipment Corporation



Booth 52

1700 Enterprise Way • Suite 116 • Marietta, GA 30067 • PHONE 770-984-8880 • FAX 770-984-2802
EMAIL info@usbsec.com • WEB www.usbsec.com

189

ENGINEERED TO LAST

We Train Installers

We Sell Tools



MR. MANHOLE
MANHOLE LEVELING SYSTEM



PHONE: 419-229-3015 WWW.MRMANHOLE.COM

274

Your Source For: The Best Quality Products & Emerging Technologies



Custom Designed Service Vehicles



VeriSight Push Camera



Rover

Seek Tech Utility Locator

NEW

Rely on us for the best in:

- Water Leak Detectors
- Gas Detectors
- Line Locators
- Fall Protection
- Video Inspection

We Sell The Tools That Work!

Call for more information.

800.992.0222

138



Order online 24/7 - www.advancedworld.com

INNERSEAL™ CONNECTION SYSTEM

Tee & Wye connections from 6" x 4" to 36" x 12"
Lateral lengths available from 18 inches to 50 + feet
All materials have been third party tested to meet
all the requirements of ASTM F-1216-07a

The InnerSeal System is covered by one or more of the following US Patents: Patent Nos. 5,108,533; 5,393,481; 5,624,629; 5,692,543; 5,706,861; 5,915,419; 5,927,341; 5,975,878; 6,001,212; 6,029,726; 6,044,867; 6,068,725; 6,146,491; 6,337,114; 6,520,719; and 6,899,832 and Patent Application No. SN 11/135,792.



PERMA-LINER SECTIONAL POINT REPAIR™ SYSTEM

Repairs 6" to 54" Diameter Pipelines
100% Solids Epoxy
Reinforced Materials With A PU Coated Finish
As Many As 7 Repairs In A Single Day
Exceeds ASTM F1216 Specifications
Manufactured In Kit Form, No Measuring Or Waste
The Perma-Liner Sectional Point Repair™ System is covered under Patent # 5,049,003

**Providing LIVE demonstrations
at the Pumper-Cleaner Expo**

Visit us at Booth 1186

**PERMA-LINER™
INDUSTRIES, INC.**



1-866-336-2568 TOLL FREE

1-727-507-9749 INTERNATIONAL

LOOK WHO BACKS GOVERNMENT SPENDING

Is it possible that supporters of increased public expenditures include people who are not socialists, do-gooders, government workers and freeloaders?

Our new president and Congress have inherited a bushel basket of problems, one of the toughest being the federal budget: the deficit, spending priorities, taxing.

Amid all that, we have the little matter of \$500 billion that needs to be spent in the next 20 years or so to renew drinking water and wastewater infrastructure. No one denies the work has to be done. So, where will we get the money?

During the presidential campaign, we heard the usual noises about how we need a federal spending freeze and how we can't raise anyone's taxes. We also heard about the supposed evils of "spreading the wealth around" and about socialistic politicians who want to take money away from Joe the Plumber.

By that line of thinking, we have private enterprise over here, believing that government

water systems, which of course at some point means higher taxes or user fees. They're doing it under the auspices of well-known socialist organizations, such as the Associated General Contractors of America (AGC), the National Utility Contractors Association (NUCA), and the National Association of Sewer Service Contractors (NASSCO).

These organizations don't represent the plumbers who go to houses to fix sinks and toilets, but they do represent people who install and rehabilitate the large-scale plumbing of our municipal sewer and water systems. That is, they look a lot like Joe.

Sustainable funding

Just look at what a couple of these subversive organizations are saying. Here's the AGC on its issue advocacy Web pages: "Congress has cut funding in recent years and should restore funding levels for the Clean Water and Safe Drinking Water State Revolving Loan Funds (SRFs) to a minimum of \$1.35 billion and \$850 million, respectively. Even with these historical funding levels the SRFs are significantly under funded.

"AGC supports creation of a long-term, sustainable, off-budget source of funding for clean water by creating a trust fund to finance construction and maintenance of this critical environmental infrastructure."

Here's NUCA: "NUCA serves as chair to the Clean Water Council (CWC), a construction industry-based coalition that takes a lead role toward passage of water infrastructure legislation. The CWC is a group of 30 national construction contractors, suppliers, manufacturers, engineers and other associations [that] works on all levels of the legislative process to promote water infrastructure funding. ..."



FROM THE EDITOR

Ted J. Rulseh

It's an investment

You'll note that all these are mainly business organizations — not mayors or public works directors or wastewater treatment superintendents who naturally would want more funding for their operations.

These groups and their members understand something basic about government spending. Bill Clinton was perhaps the first president to try turning the pejorative "tax and spend" into the more positive "invest and grow." He didn't have much luck with that, but he was in fact on to something.

Properly focused government spending can be without question an investment — one that is not only good but necessary. Money invested in safe, clean, reliable drinking water and effective sanitation creates jobs that can't be outsourced — jobs that pay high wages and comprehensive benefits and support families. In the bargain, it protects public health and improves the quality of life for everyone.

Maybe that's why there's substantial public support for investments in sewer and water, and for that matter other public facilities. Here's AGC again:

"Recent polling shows that 86 percent of Americans support legislation by the U.S. Congress that would create a long-term, sustainable, and reliable trust fund for clean and safe water infrastructure."

So it turns out that not everyone hates the thought of government spending. And a great many people don't mind spending that has the effect of "spreading the wealth around." In fact, an awful lot of people like it and know we need it. Even — and perhaps especially — Joe the Plumber. ♦

Comments on this column or about any article in this publication may be directed to editor Ted J. Rulseh, 800/257-7222; editor@mswmag.com.

"Recent polling shows that 86 percent of Americans support legislation by the U.S. Congress that would create a long-term, sustainable, and reliable trust fund for clean and safe water infrastructure."

Associated General Contractors of America

spends too much, and a bunch of freeloaders over there, waiting with their hands out for government largesse.

Not that simple

But guess who is leading the charge for a significant and long-term increase in government spending. It looks like ... Could it be? ... By golly, it is: Joe the Plumber! Actually tens of thousands of Joe the Plumbers, and hundreds of thousands of others in related professions.

Yes, private enterprises — business owners and people who work for them — are pushing for federal investment in our water and waste-



Blue-Tek™

The Next Generation of Ultra-Violet Cured Pipe Liners and Equipment

- ♦ Styrene levels measured undetectable in recent 3rd party testing
- ♦ Passed 100% Liner Wall Porosity Test
(IKT Liner Report - www.ikt.de)
- ♦ 4-8 Times stronger than felt liners
- ♦ Six month non-refrigerated shelf life

Quality-Tracker™ System

- ♦ Award Winning Quality-Tracker System installation equipment with tamper-proof computer documentation of the in-line curing process
- ♦ CCTV of entire liner in pipe *prior* to curing
- ♦ Unparalleled speed and ease of installation
- ♦ Cost-competitive pricing

866-998-0808
www.relineamerica.com

426



RELINER AMERICA, INC.

Quality Driven!

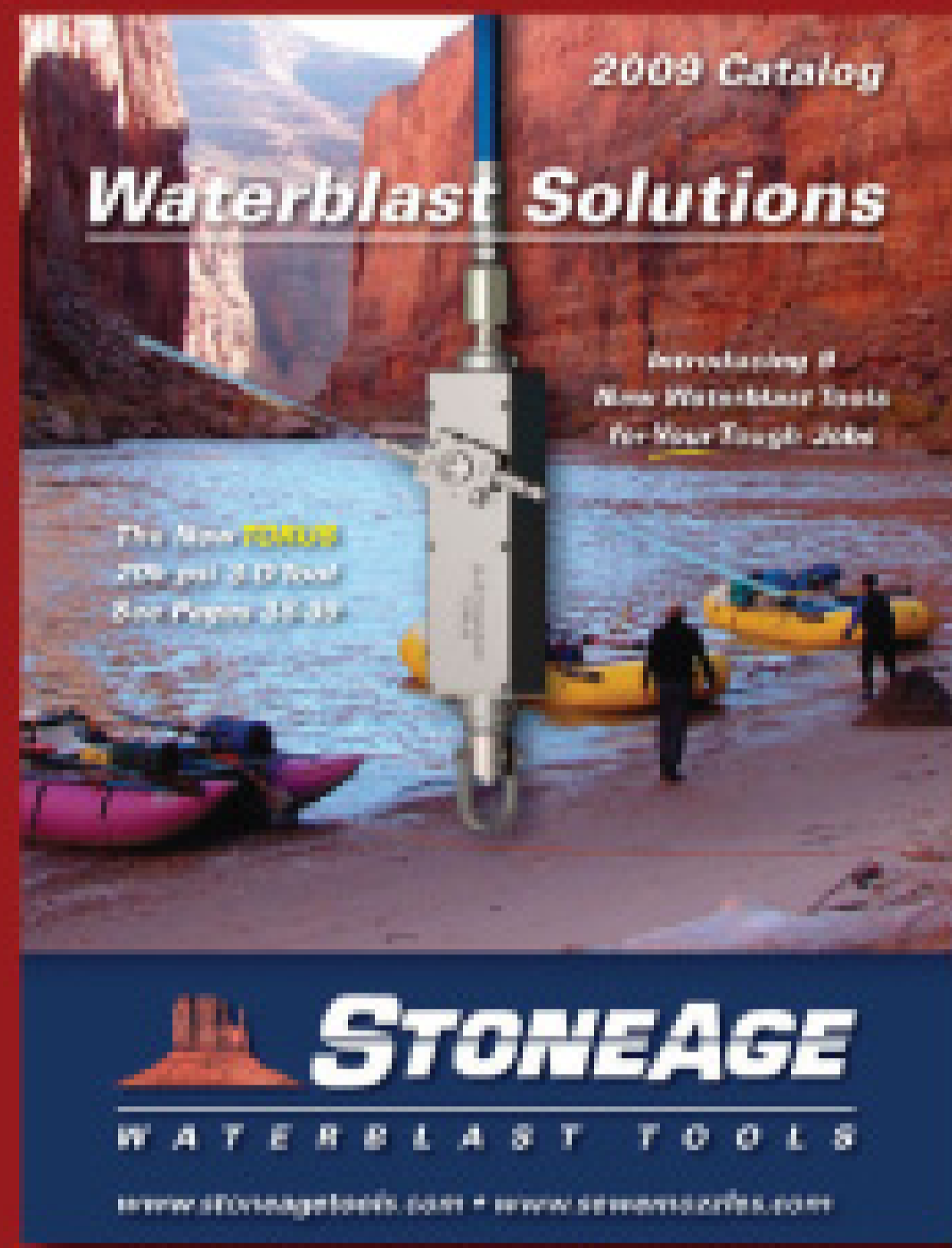
Manufacturer's Quality
 Installation Quality
 Environmental Quality



Come see us at the Show!

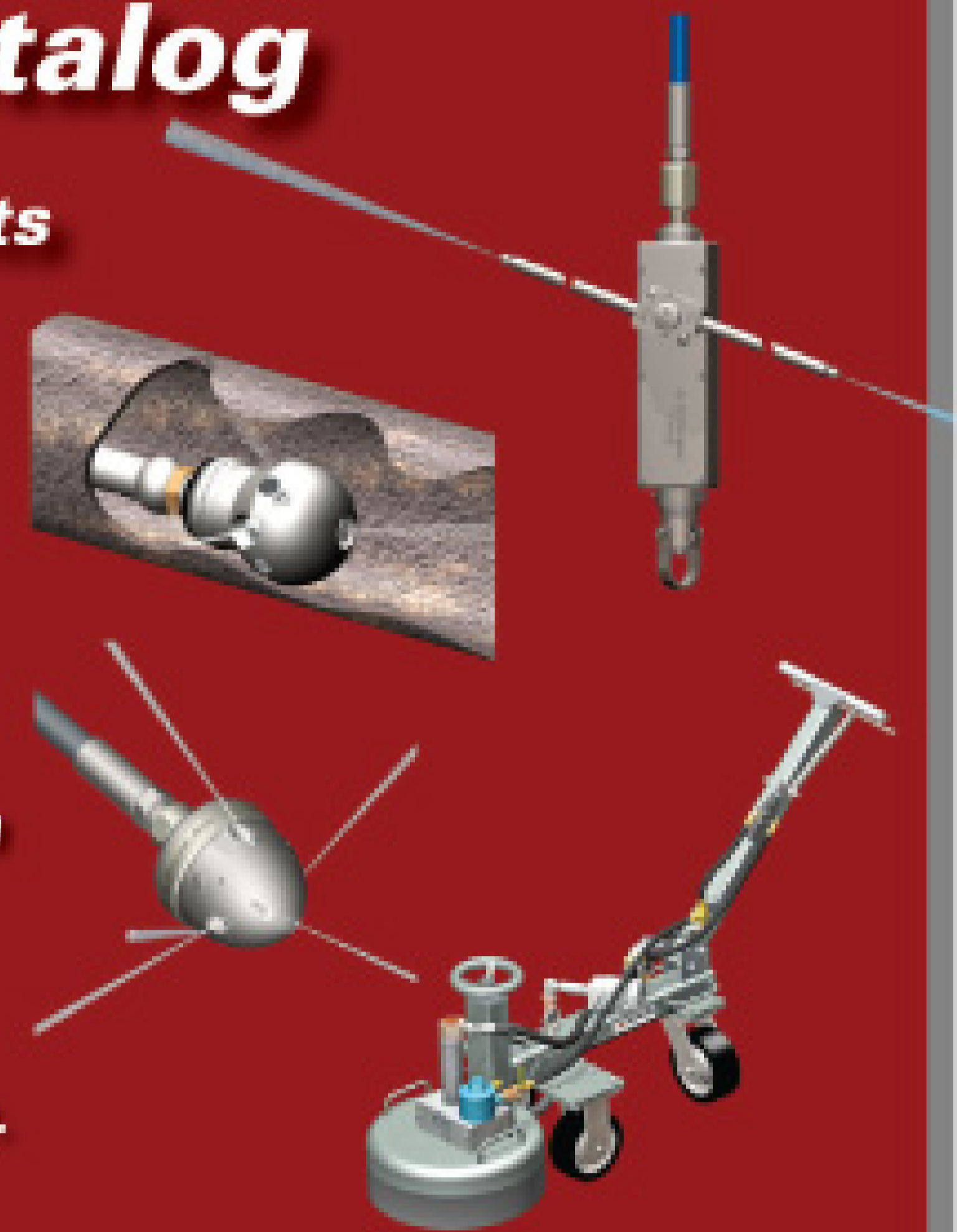
New Tools, New Booth, New Catalog

If you are interested in the latest advancements in high pressure waterblast tools come see StoneAge.



2009 StoneAge catalog with 9 New Tools!

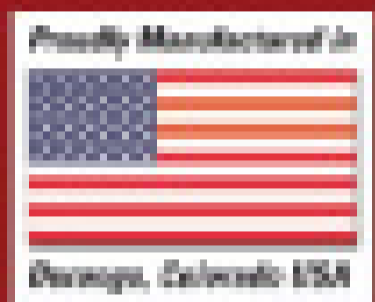
- **New Tools** - We will have a booth full of new tools for cleaning tanks, tubes, pipes, surface preparation, providing both safety and automation.
- **New Booth** - We have moved our booth location to #4133, it's over 2 times larger than last year!
- **New Catalog** - Our new 2009 catalog is full of our latest advancements. Come by and get your new copy.
- **New Website** - Our 2009 catalog becomes our web site, so if you can't make the show, see us on the web.



Here is just a sample of some of the new tools!

www.stoneagetools.com

P. (866) 795-1586 F. (970) 259-2868



2009 Pumper/Cleaner Exposition

Booth #40



Air Machines
Liquid Vacs
Liquid Rings
Roll-Offs
130 Bbls
Cyclones
Combos

YOU MIGHT AS WELL
RENT THE BEST.

NEED IT? RENT IT!

1-888-955-2087

Mississippi • Louisiana • Texas • South Carolina

www.vactruckrental.com

**VACUUM
TRUCK
RENTALS**
LLC

416

Extend Your Hand February 25-28



15,000

NETWORKING OPPORTUNITIES EXIST

www.pumpershow.com • 800.257.7222

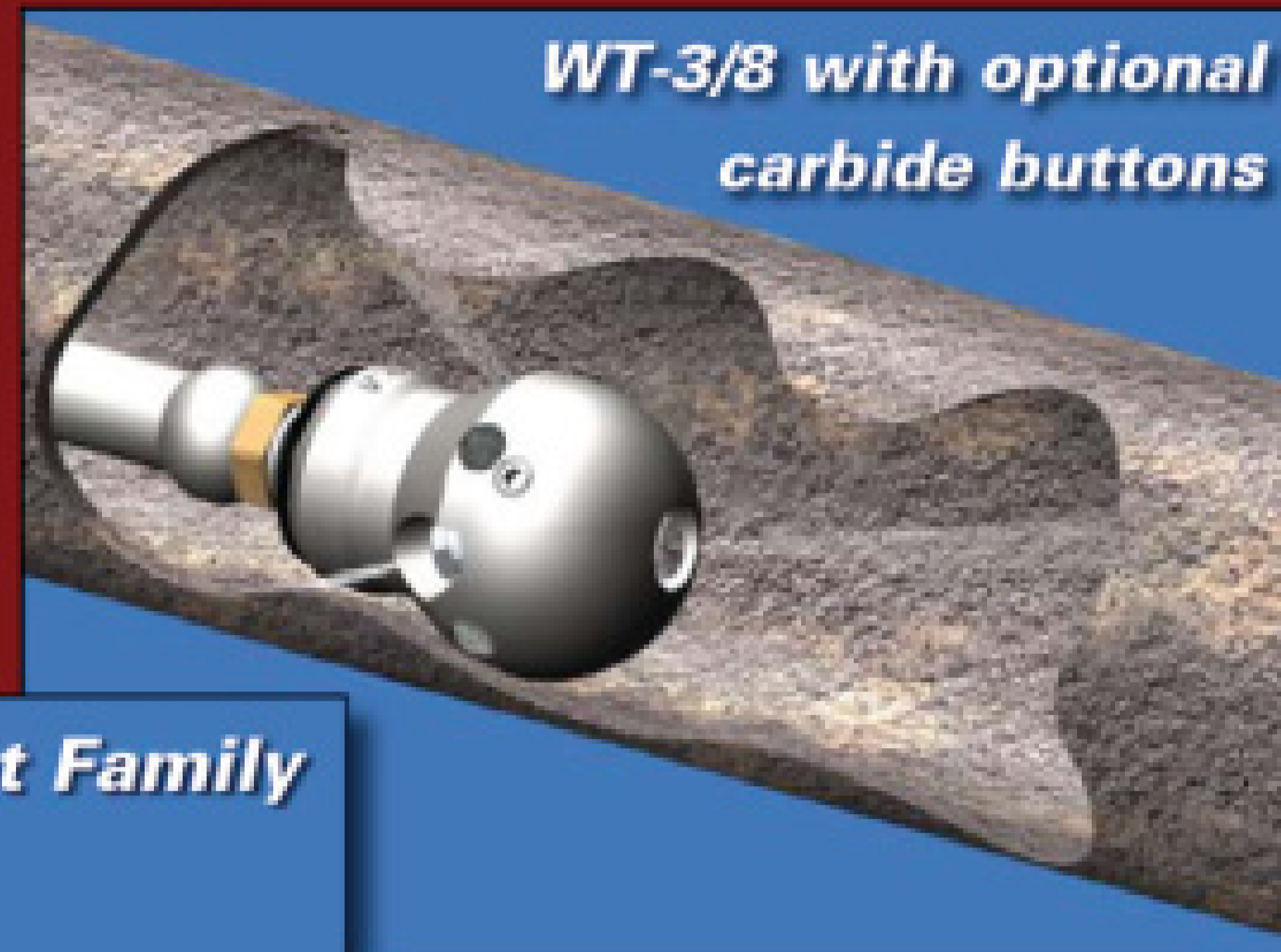


WARTHOG™ Solutions

For Demanding & Abrasive Sewer Line Cleaning

NEW

For everyone from trailer jettors to pumper trucks & municipalities

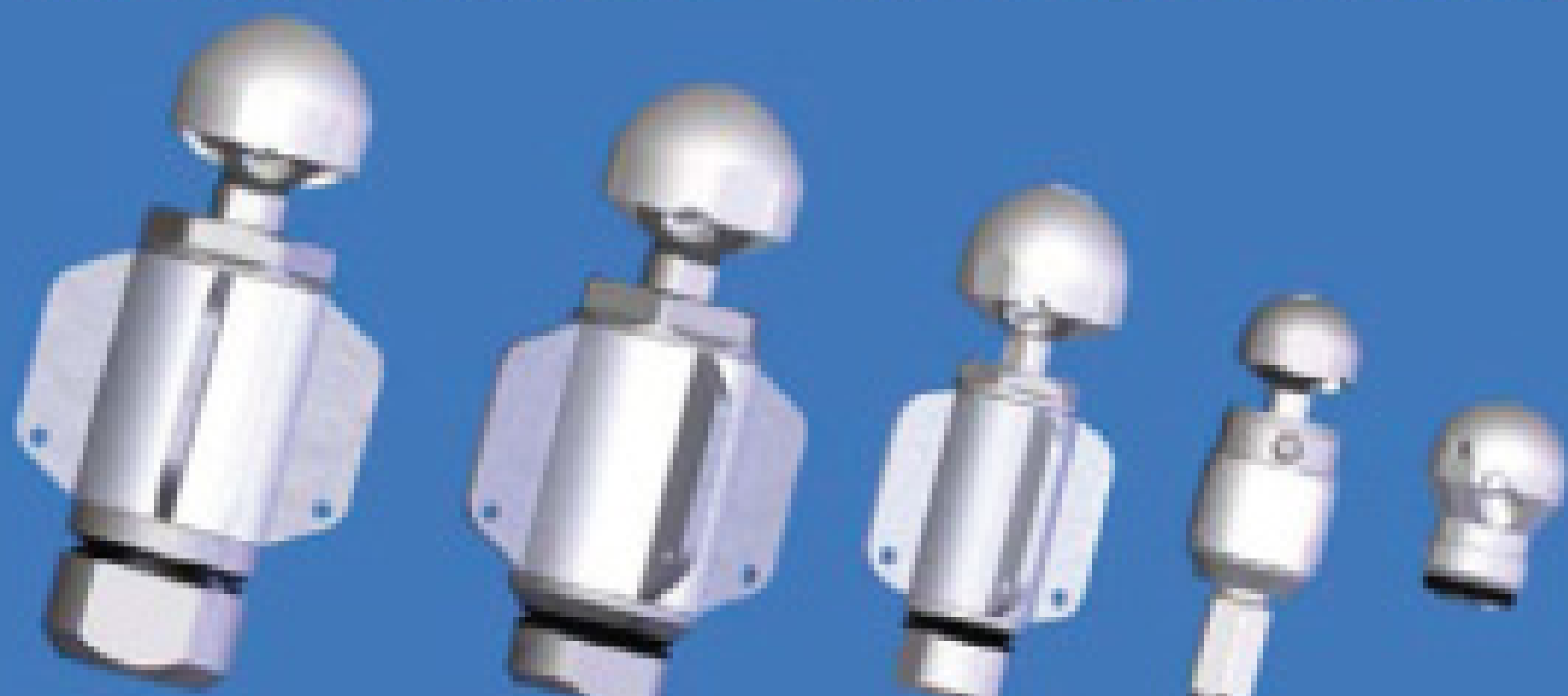


WT-3/8 with optional carbide buttons

WT-3/8 Warthog™ now available with carbide buttons

Pipes made of cast iron or those with sand or silt can act as abrasive agents that aggressively wear out tools. StoneAge has added carbide buttons to the WT-3/8 to extend the life of the tool by at least 3 times.

The WARTHOG™ Sewerjet Family



WD 1-1/4 6"-36" Pipes	WG-1 6"-36" Pipes	WH-3/4, 1/2 6"-18" Pipes	WS-1/2 4"-8" Pipes	WT-3/8 3"-6" Pipes
-----------------------------	-------------------------	--------------------------------	--------------------------	--------------------------

Visit www.sewernozzles.com for a dealer near you!



11

Sto-Away Power Cranes

TAKE THE WORK, OUT OF WORK!™

The faster, safer, and more efficient way to get the job done!

A VERSATILE TOOL FOR MUNICIPALITIES AND SEWER PROFESSIONALS

Ask for the STO-AWAY POWER CRANES on your next bid

Compliments of King County Environmental Lab

- CCTV Launching/Retrieval
- Confined Space Work
- Bulky Loads

Booth 3041

Compliments of Best Equipment & Muncie Sanitary District

Sto-Away Power Cranes, Inc.
9306 Grand Blvd. • Crown Point, IN 46307
1.800.622.9797 • 219.942.9797 • www.stoaway.com

Certified WENCO

© 2009

DML2000

The best Magnetic Locator on the market

- Easily pinpoint buried septic tanks, water valves, water meters, survey pins, iron pipes ...
- All weather operation; -20° to 120° F
- Works great in rain, sleet or snow.
- Waterproof Sensors; base of electronics to the crutch tip.
- Comes with a Hard Plastic carrying case or a soft-padded case.
- USA Bluebook P/N: 64978
- Best warranty in the business, a **LIFETIME WARRANTY**

Dunham & Morrow Inc.
43676 Trade Center Pl., Suite 145
Dulles, VA 20166 703-661-2144
www.magneticlocator.com

Control Grease—Before it Controls You!

Eliminate stoppages, bad odors & service interruptions in your collection system!

Jetfoam™, EHC-33™, Big Blue Bio Blocks and Formula 52 Odor-Eliminating Enzymes form a powerful solution for system-wide grease and odor control. Together these products keep your lines running clean and odor-free to full capacity.

Now, for a limited time, USABlueBook offers a **10%** introductory discount on this grease control system. Just call 1-800-548-1234 and mention **Promo Offer CMS** when placing your order. Offer ends October 16, 2009.

DESCRIPTION	STOCK #	REG. PRICE	PROMO PRICE
Jetfoam Emulsifier, 5-Gal Pail	MS-48163	\$ 127.95	\$ 115.16
EHC-33 Bioenzyme, 25-lb Pail	MS-48165	389.95	359.96
Big Blue Bio Block, 5-lb	MS-49828	86.95	87.26
Big Blue Bio Block, 10-lb	MS-49829	188.95	170.96
Big Blue Bio Block, 30-lb	MS-49831	379.95	341.96
Formula 52, 1-Gal Jug	MS-64702	36.95	33.26
Formula 52, 5-Gal Jug	MS-64703	176.95	159.26

The industry's most complete line of grease control products

USABlueBook is your one-stop shop for all of your collection system needs. We offer the equipment and supplies you need to not only clear current blockages, but to prevent future blockages from occurring. With over 27,000 items in stock, we have what you need, when you need it.

Call for your **FREE Catalog!**



Big Blue Bio Block for Lift Stations



USABlueBook Formula 52 Odor-Eliminating Enzymes

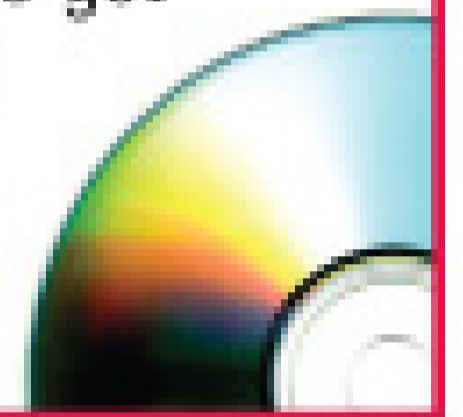
EHC-33 Bioenzyme comes in convenient drop-in packets!



Jetfoam

Learn more; request your free DVD/Video!

For more information on Jetfoam Emulsifier, USABlueBook offers a free training DVD/Video. Just call and request **Item # DVD** to get your personal copy today.



USABlueBook
Get the Best Treatment™

1-800-548-1234 • www.usabluebook.com

309

Central Winnelson

SeeSnakes™

Call us for Our Lowest Price!



LCD - DVD MONITOR AVAILABLE

SeeSnakes and Locators Ship Free!

AUTHORIZED RIDGID SEESNAKE REPAIR CENTER

Ridgid SeekTech®

Locating Made Easy



Price Too Low to Advertise!

CALL FOR SPECIAL RIDGID PROMOTIONS

6% one year financing available. Longer lease rates also available. Call Keith for details.

Buying a SeeSnake?

CALL US FOR GREAT PRICING AND FREE SHIPPING!

WE WILL NOT BE UNDERSOLD

191

— Call Us Evenings and Weekends —
Keith: 405-602-9155 & Jim: 405-205-3974

5037 NW 10th • Oklahoma City, OK 73127
www.centralwinnelson.com

Toll Free: 888.947.8761

PIPEHUNTER JETEYECAMERA

Jet Eye Camera Retrofits

Equip your combination cleaning truck with a jet camera system and **DOUBLE THE CLEANING PRODUCTION** while **CUTTING YOUR FUEL COSTS**.

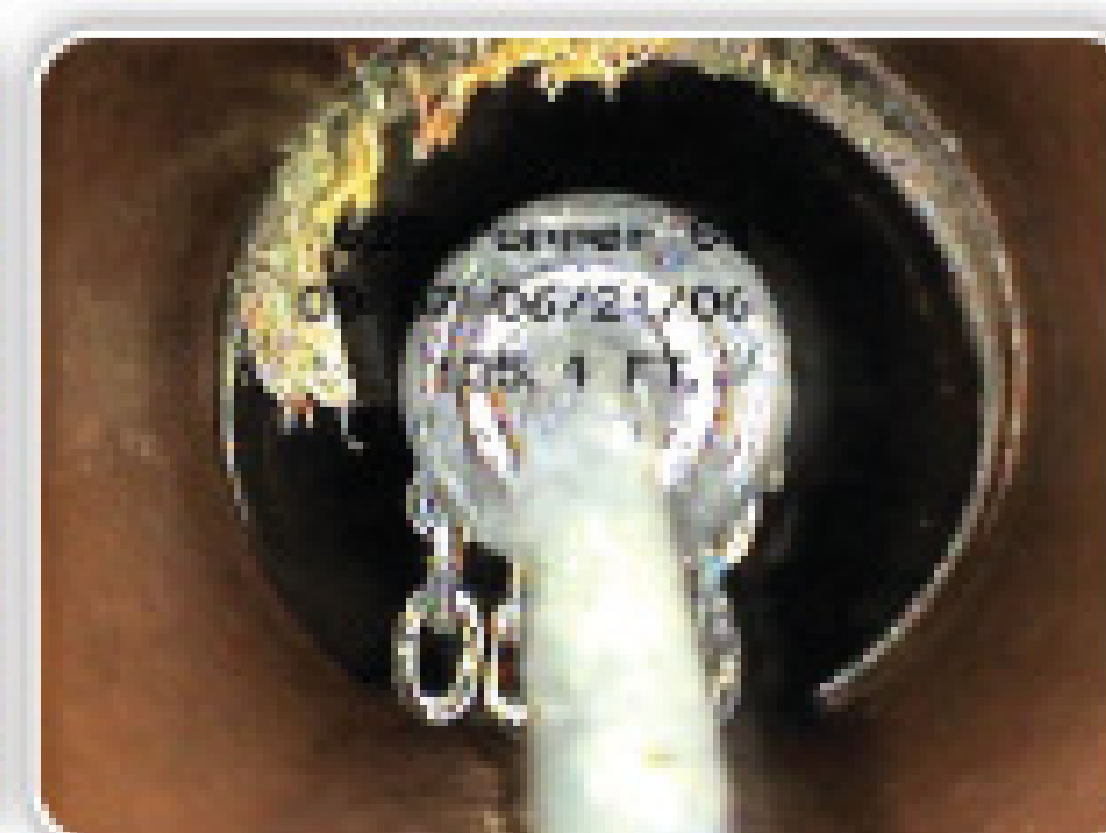


1.800.373.1318
www.pipehunter.com

LOWER
YOUR
FUEL
COSTS

2^x
DOUBLE
YOUR
PRODUCTION

View on monitor while cleaning



Richard Bailey performs a water quality test on Lake Merritt. Bailey works for one of the nonprofit organizations that help the City of Oakland maintain local water quality. (Photography by Lezlie Sterling)

FOCUS: STORM

CREATIVE COMPLIANCE

The City of Oakland achieves full NPDES Phase II compliance with award-winning innovations to improve environmental aesthetics and enhance the quality of life

By Dan Heim

The City of Oakland enjoys some of the best weather in the country, but when it does rain, the local geology presents some daunting obstacles to stormwater control.

One-third of the service area consists of steep hills with 100-year-old open drainage channels not amenable to subterranean piping. And the other two-thirds comprise the sixth most densely urbanized region in the country.

Though not directly responsible for system maintenance and construction, the city's Watershed and Stormwater Management Division (WSMD) is tasked with the planning and funding that makes the job possible. As supervisor Lesley Estes explains, "With the

City of Oakland's recent extensive reorganization, we no longer work for the Department of Public Works. We're now under the city's Community and Economic Development Agency, and that includes all planning, engineering and design."

Oakland doesn't charge stormwater fees to residents or businesses, so that makes funding a creative process. California's Proposition 218 set the voting percentage very high for approval of such fees. "WSMD gets a small slice of the sewer fees," says Estes, "but beyond that I need to do some very creative funding."

That creativity is not limited to funding; it also extends to WSMD's stormwater solutions. WSMD won a National First-Place Clean Water Act Recognition Award from the

U.S. EPA, and an Excellence in Stormwater Management Award from the California Regional Water Quality Board, for its stormwater management, creek and wetlands restoration, and educational projects.

Funding finesse

Most of WSMD's funding comes from grants, bonds, and mitigation and redevelopment fees. Agencies providing grants (totaling \$3 million to date) include:

- California State Parks Urban Access Program
- The Coastal Conservancy
- California State Parks Trails Program
- California State Parks Habitat Restoration Program
- California State Department of Water Resources



PROFILE:
City of Oakland, Calif.,
Watershed and
Stormwater
Management Division

SERVICE AREA:
City of Oakland, Calif.

CUSTOMERS:
420,000

COUNTY AREA:
78 square miles

EMPLOYEES:
6

ANNUAL PRECIPITATION:
23 inches

INFRASTRUCTURE:
100 miles open creeks,
300 miles drainage pipes,
15,000 structures

ANNUAL BUDGET:
\$1.05 million (operating)

WEB SITE:
www.sustainableoakland.com

- State Water Resource Control Board.

Local bond issues have also been successful, providing nearly \$15 million over 20 years. Estes credits public outreach with grassroots support for these bonds. “People appreciate the quality of life here, and don’t take it for granted,” Estes says. “It isn’t just about NPDES compliance. We help them understand the direct relationship between water quality and life quality. It has paid off with bond support as well as volunteerism.”

Lesley Estes, watershed program supervisor for the City of Oakland.



The landscape of the City of Oakland poses unique challenges in protecting water quality from stormwater runoff.

Mitigation fees have raised \$1.25 million to date, drawing from the California Department of Transportation (CalTrans), the Oakland Army Base, and Union Pacific Railroad. Union Pacific wanted to rebuild a trestle over a wetland. To ensure that the wetland was brought back to a pristine state, a mitigation fee of \$579,000 was assessed, to be used by WSMD for restoration.

How bad is the bay?

San Francisco Bay is a huge body of water with good tidal mixing. If you include all the sub-bays,

“People appreciate the quality of life here, and don’t take it for granted. It isn’t just about NPDES compliance. We help them understand the direct relationship between water quality and life quality. It has paid off with bond support as well as volunteerism.”

Lesley Estes



GREAT WEATHER, CHALLENGING GEOLOGY

Rand McNally recently named Oakland as having “the best weather in the United States.” Its climate is often described as Mediterranean — temperate and seasonally arid.

Warmer than San Francisco and cooler than San Jose, Oakland sits across the San Francisco Bay from the Golden Gate Bridge and is cooled by maritime fog in the summer. But it’s far enough inland that the fog burns off by midday.

Local topography runs from sea level to the Oakland Hills, at elevations from 1,000 to 2,000 feet. The exclusive Hills area comprises about one-third of the city’s area and is home to spectacular views of the bay, expensive homes, wildfires and mudslides. Bounded by the Hayward Fault on the west and the Wildcat Fault on the east, the Hills area presents as many challenges to city engineers as it does to architects and residents.

The other two-thirds of the city, known as the Flats, is densely urbanized. Of course, with that comes a large amount of impervious surfaces, not to mention potential sources of pollution.

Oakland is also a major port, cultural center and recreational hotspot. Some 30 named streams and countless others meander from the Hills to the ocean, and protected wetlands lie along the bay. Residents and city planners are proud of the quality of life, and a fierce drive to retain that quality helps cooperation to improve the watershed.



Estes walks around Butter’s Canyon and Peralta Creek, a creek preservation program where the City of Oakland acquired land to protect valuable headwater and creek habitat.

estuaries and wetlands, it covers some 1,600 square miles. Yet it remains vulnerable to pollutants, given the high urban density around it. Water quality has been improving, thanks to programs like WSMD's, but there are still some problems.

"We do have some problems with mercury, copper and PCBs, but there's also the issue of sediment from the Oakland Hills area," Estes says. "The steep slopes cause extensive erosion, and we consider those sediments a pollutant."

Oakland represents only a fraction of the bay's total load, but every city needs to do its part. In one case, regional monitoring traced PCBs to a source in Oakland. WSMD applied for a grant to do PCB studies and abatement.

"What we found," says Estes, "wasn't individual point-source barrels leaking PCBs, but a whole area in our watershed where past industrial activity had generated widespread contamination." The PCBs were attaching to sediment in the runoff.

WSMD's solution was a combination of street washing, sediment collection, and diversion of runoff to a treatment plant. "We collaborated with the local sanitary sewer district, and now, when it rains, we divert the first flush to one of their treatment plants," Estes says. Problem solved.

Problems with plastic

Plastic floatables comprise a major part of the stormwater treatment load, and so does other street trash. The city recently banned foam fast-food packaging. All take-out is now packaged in biodegradable containers made from recycled paper or cornstarch.

"It was really amazing to see how fast the food vendors responded, and the number of new packaging options that emerged," Estes observes. "It's great to see how the actions of one city like Oakland can drive the packaging industry to provide products that allow other cities to follow our example."

Plastic grocery bags, however, were another story. The city council passed a ban on the bags, but the packaging industry sued the city for not conducting an environmental impact analysis. "That was ironic, since the industry actually



Lesley Estes is shown in the area of the Sausal Creek restoration project, which included the removal of concrete channels. The creek is a natural habitat for native rainbow trout.

"We look at things in a holistic way. From the Hills right on down to the ocean, we try to do what is best for the watershed. And it's more than just stormwater BMPs. What we try to do is supplement that with habitat that not only improves the quality of the water, but also improves the quality of life."

Lesley Estes

used environmental law to subvert our best intentions," Estes says.

"Considering that the city currently has a \$40 million deficit," she notes, "we just couldn't spend half a million dollars on an environmental impact statement. So we reacted by starting a public education campaign on the benefits of recyclable canvas or nylon bags, and that is really taking hold and making a difference. Also, instead of providing T-shirts to our citizen volunteers, we now give out canvas grocery bags."

The packaging and grocery industries are powerful. When San Francisco began charging a fee for plastic grocery bags, the industries successfully lobbied the state to rule that such fees were unconstitutional. San Francisco reacted by passing an outright ban on plastic bags and, in that case at least, beat the litigants to the punch. By the time Oakland launched its effort, the industries had regrouped and were ready with their lawsuit tactics.

Problems in the hills

The Oakland Hills area, part of what is officially known as the Berkeley Hills Range, is only a third of the total city area, but creates a disproportionate load on WSMD stormwater efforts. The

problems stem from topographic, historic and political factors.

The land is steep with relatively dense housing developed in the early 1900s when impervious surfaces and stormwater runoff were of little concern. The steep slopes, as well as ground movement from numerous faults, preclude typical underground drainage systems. The vast majority of runoff is conveyed by hundreds of natural open channels that are highly susceptible to erosion. Much of the soil is easily saturated and unstable, and massive mudslides often restructure drainage patterns, not to mention hillside homes.

"The unrestrained runoff causes what we call hydro-modification on the slopes," explains Estes. "We've had to keep in mind their right to develop, but at the same time, we've had to impose BMPs on the development to mitigate the impact."

BMPs include — for approval of a building or remodeling permit — habitat modification along any open channels. The right plant species can hugely reduce erosion, an example of what Estes calls bio-engineering. WSMD also specifies changes in the stormwater drainage system. "What we try to do," says Estes, "is get them to modify their drainage so it's not so concentrated."

In 1991 the Hills suffered its worst fire. Some 3,000 homes burned, and many lives were lost. The Oakland Fire Department responded with a strict program for control of vegetation that contributes to wildfires. In practice, that means less vegetation. And that, of course, means more erosion.

WSMD has worked closely with the fire department to ensure that the right species are planted. The right plants do not easily spread ground fires, have robust root systems that hold the soil together against erosion, and thrive in the local climate and soil. Such plants exist, and WSMD provides specific recommendations on its Web site.

Successful experiment

In one case in point, Glen Echo creek had seen significant hydro-modification, and eroding banks were threatening some structures. The Alameda County Flood Control District approached WSMD for a solution. Typically, rock and soil were dumped along the banks to shore them up. Experience had shown this was, at best, a temporary solution. Another approach was to channelize the flow using concrete or metal. But that didn't fit with WSMD's goal of preserving the natural appearance of the watershed.

So WSMD suggested a new and still experimental process known as soil lift bioengineering. "People didn't like the sound of that, but we believed it could work, so we got the funding for a pilot project," Estes says. "Of course, you have to be cautious, but you just can't be afraid to experiment. This is a growing field, and the engineers have new ideas every day."

Soil lift engineering uses layers of fabric-bound, compacted soil built up in a terrace-like system along the creek banks. "It's kind of like a sleeping bag," says Estes, "with a layer of fabric laid down, soil compacted over it, and the fabric then folded over to make a sealed system." The terrace-like appearance is only temporary. Within a year, after the aspen, willow and other flora take hold, it appears to be natural habitat.

At the zoo

One of WSMD's major education programs is the Creek Edu-

AT APPLIED FELTS, THE SUN NEVER SETS.

As the world's largest independent manufacturer of quality cured-in-place-pipe (CIPP) felt liners, our day is never done. Day or night, we support our customers every step of the way – in the field, on the phone, or face-to-face. Why? Because our customers are our greatest asset, and when they succeed, so do we. We take our position as a global leader seriously, and with over 30 million metres of successful underground installations around the world, the sun is always shining on a successful Applied Felts project.



417

APPLIEDFELTS.COM

cation Center, a permanent and popular attraction at the Oakland Zoo, that draws students from the entire area. Arroyo Viejo Creek, already scheduled for restoration, runs through zoo property and had been developed as a picnic area.

"We saw this as a golden opportunity," says Estes. "The creek needed some significant work. But with all the children who come to the zoo for environmental education, we thought this would also be an ideal location to create an education center focused on wildlife habitats, stormwater pollution and water quality."

WSMD built the facility, developed the curriculum, and then handed it all off to the zoo, which incorporated it into its existing educational offerings. The picnic area is still there, and it's a lot more popular now that the creek has been restored, with broad walking trails and signage identifying flora and fauna.

But it's also a popular destination for school field trips, with a state-of-the-art learning center run by volunteer docents under zoo

management. Program titles include *Creeks 101*, *Your Guide to Stormwater*, and *If Creeks Came with Instructions*.

Secrets to success

WSMD's successes to date are impressive, given the funding limitations, political opposition and geologic difficulties. Federal and state awards are a testament to the skill and creativity brought to the task. As with any winning team, WSMD has a playbook.

"We look at things in a holistic way," says Estes. "From the Hills right on down to the ocean, we try to do what is best for the watershed. And it's more than just stormwater BMPs. What we try to do is supplement that with habitat that not only improves the quality of the water, but also improves the quality of life."

Another secret to success, says Estes, is simple. "Hire people who care. When you have people who care, they provide their own motivation. And on the public side, provide the people with a sense of ownership. Ownership is a good motivator." ♦

Lumberjack®

NozzTeq®
Taking Science to the Sewer!®
Equipment Engineered for Long Lasting Performance.™

Booth 8181

Rental and Leasing Services Available!
Call For FREE DVD

Phone: 1.866.620.5915 Fax: 603.413.6744

www.nozzteq.com

Jaws® 10-Year Limited Warranty
Orca™
Paikert™
C-Ray™ 400
Hammerhead™ 5-Year Limited Warranty
Spinner™
C-Ray™ 800
IceBear™

244

A Boost in Productivity.

Free with every nozzle.

For over 25 years Shamrock Pipe Tools has been helping sewer service pros achieve unparalleled results with high precision tools for every type of pipe cleaning project.

Call or visit us online today to learn how working with our tools can impact your sewer cleaning performance and productivity.

SHAMROCK PIPE TOOLS, INC.®

800.633.7696 | www.shamrocktools.com

Made In the USA




See Us in Louisville #2203

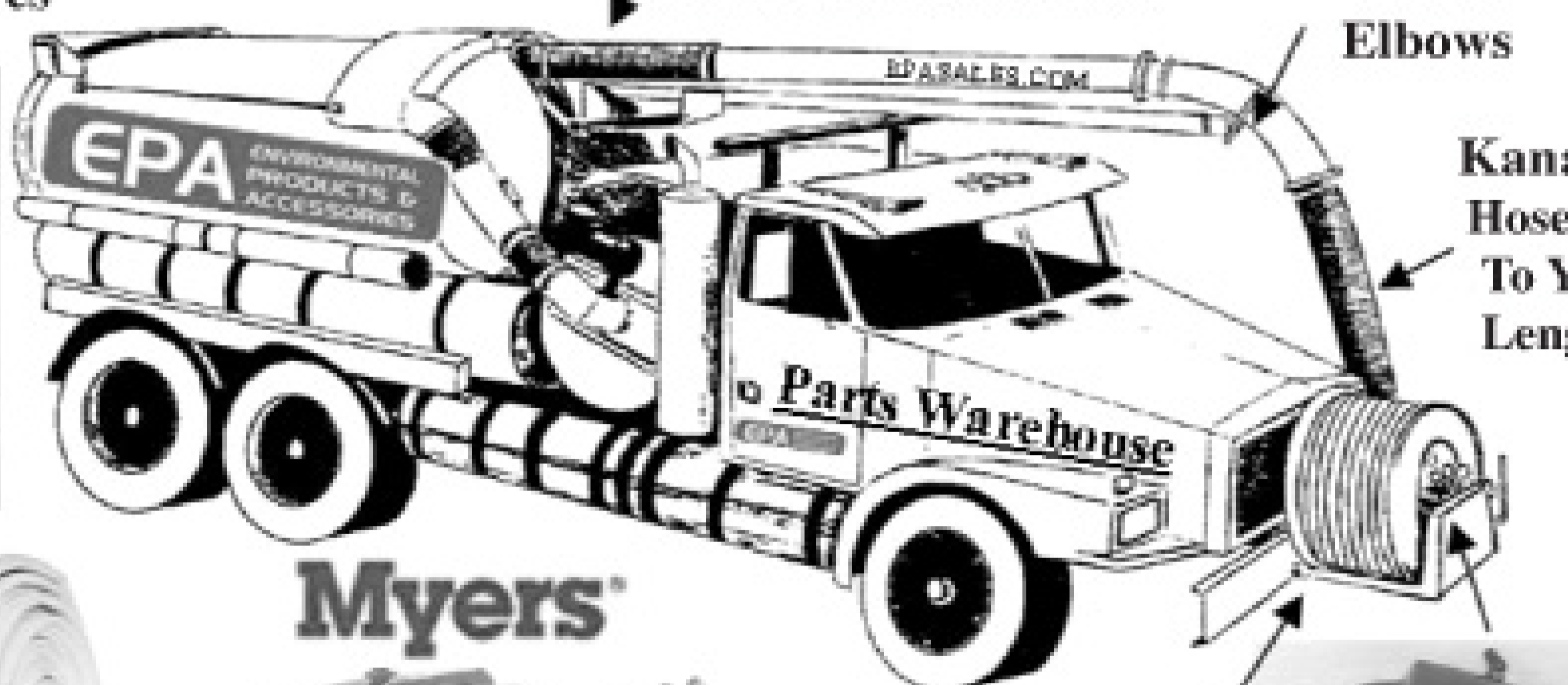
14

EXCELLENCE IS REFLECTED IN EVERYTHING WE MAKE.™

Brass Valves



Myers®




Cuffed Suction Hose


Boom Elbows

Kanaflex Hose Cut To Your Length!


Suction Hose




Long Lasting Double Jacket Hydrant Hose \$140.00




Pumps, Packings Repair Kits & Parts




Parker & Piranha Jetter Hose




Washdown Gun \$140.00
Adjustable Cone to Stream



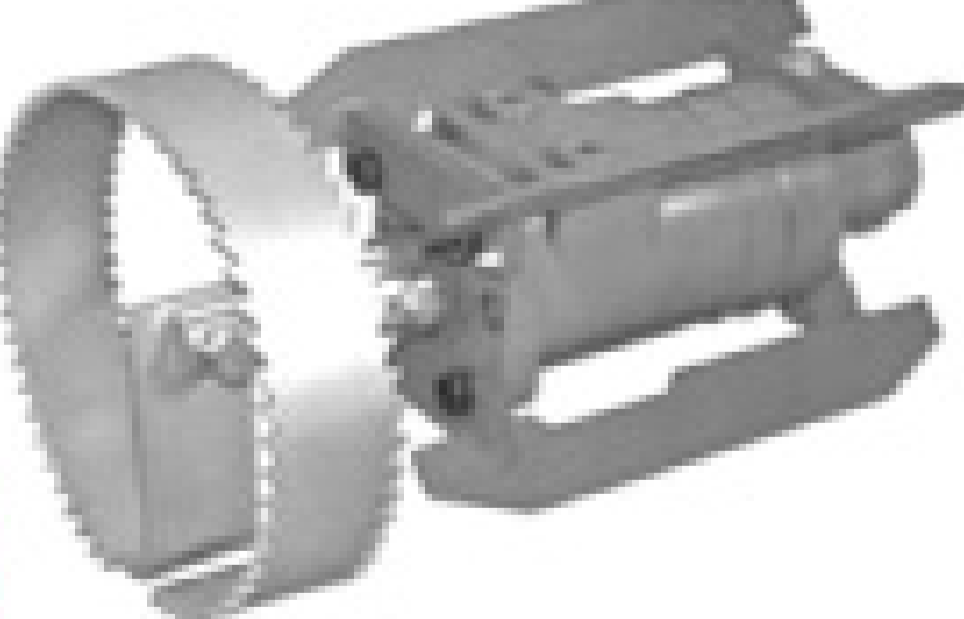
Reel Swivels \$169.00



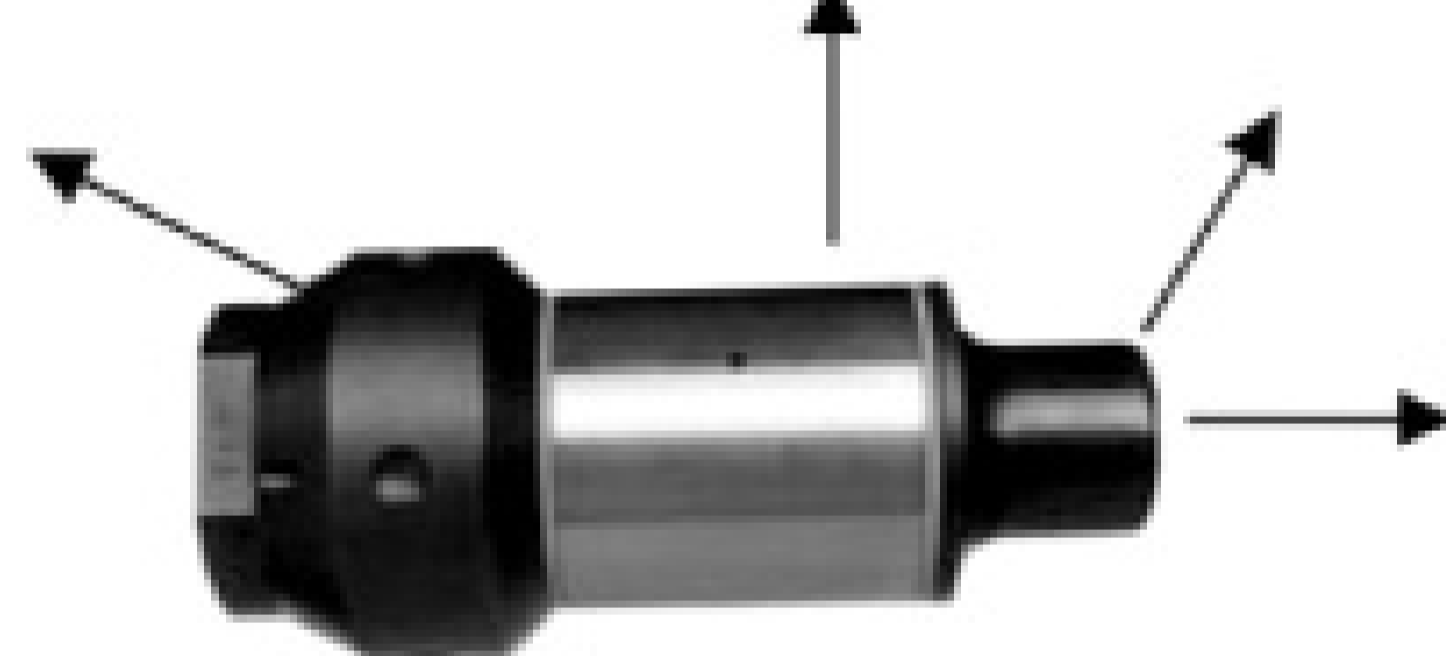
Suction Tubes



Blade Root Cutter Kit & Replacement Blades




1" Penetrating - Spin Jet Nozzle
Side or Front or Front Angle \$520.00



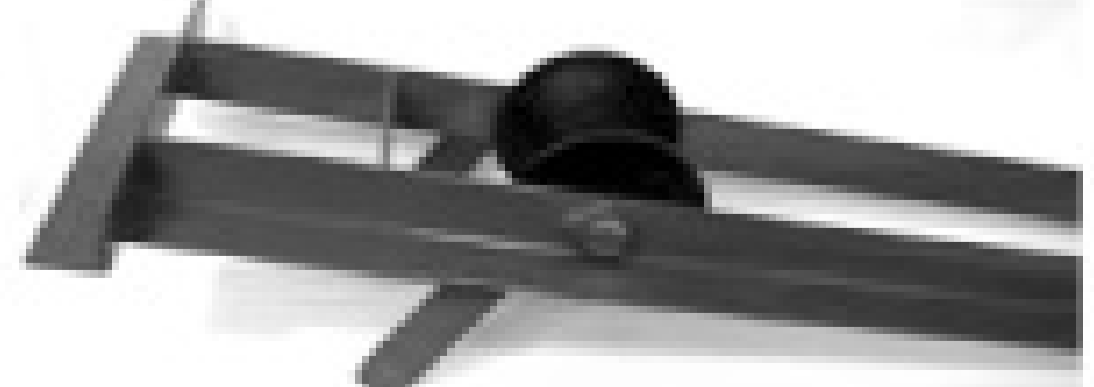
Other 1" Nozzles:

- Mega Chisel: \$Call
- Dual Degree Grenade: \$Call
- Mega Penetrator: \$Call
- Chain Cutters: \$Call


Tiger Tail \$35.00



Manhole Roller \$132.00



Ellipse \$91.00
Replaceable Jets!



Jetting and Vacuum Parts

EPA ENVIRONMENTAL PRODUCTS & ACCESSORIES

Toll Free: 866-448-5547
WWW.EPASALES.COM
Tel: 423-876-4366/Fax: 423-876-4389

Booth 3123



CLEANING SEWERS CAN BE TRICKY. USING YOUR EQUIPMENT SHOULDN'T BE.

Discover how our Camel makes the job easier.

- Industry's simplest operation sequence - single control panel set-up that even the newest employees can quickly learn
- Faster, cleaner unloading and washdowns with exclusive Ejector Plate debris removal system
- Dryer loads, fewer trips to the dump and reduced disposal costs with innovative "Super Pak" dewatering option
- Simplified diagnostics with CAN Bus wiring

Contact Super Products for a FREE DVD that shows why our Camel is simply the best combination unit on the market today!
800.837.9711 • www.superproductscorp.com



Easy to Operate; Easy to Clean; and Easy to Maintain.

chempace corporation

www.chempace.com

Serving the Industry for Over 40 Years!

One-Stop-Solutions For MUNICIPALITIES!



CALL FOR FREE DVD!

CALL FOR ADDITIONAL PRODUCTS AVAILABLE!

Learn how Municipalities can enhance their general maintenance by adding this easy-to-use liquid and jetting the sewer lines!

SEWER FOAM \$62.00 (Per Pail)

Dual-action, foaming cleaner with long-lasting bacterial treatment, reduces sewer line solids and eliminates hydrogen sulfide odors - Economical approach to sewer maintenance.

ECONOMICAL TO USE!

BUYING DIRECT ALWAYS EQUALS COST SAVINGS

CONTINUOUS TREATMENT!

bioFORCE LIFT STATION BLOCK \$160 (Per 4-5 lbs.)

Designed to last in high flow stations, provides continuous bacterial treatment, controls odors and reduces grease accumulation

bioFORCE PACKETS

grease control maintenance for lift stations and sewer lines



A well known fact: Municipalities face "unique" problems - & Chempace is internationally recognized as the Solution People when it comes to removing unpleasant odors!

20# DEODORANT BLOCK

\$165.50 (2 Per Case)

solid deodorant block eliminates odors & counteracts sewer gas odors in manholes



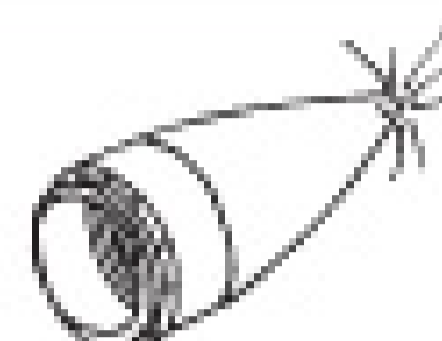
Pipeline Cleaning & Maintenance Equipment



for



JETTERS & JET VACS



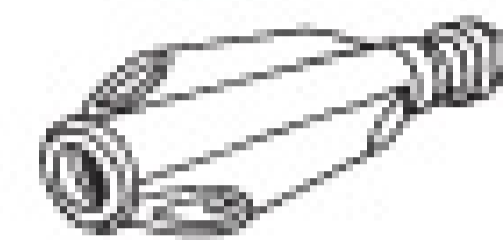
Penetrators

- 1/4"-15°\$33.00
- 3/8"-15°\$41.00
- 1/2"-25°\$46.00
- 1/2"-25°LT\$49.00
- 3/4"-12°\$55.00
- 3/4"-12°LT\$65.00
- 1"-12°\$69.00
- 1"-12°LT\$81.00



Aluminum Grease

3/4" or 1"-17° \$122.00



Truder

1"\$345.00



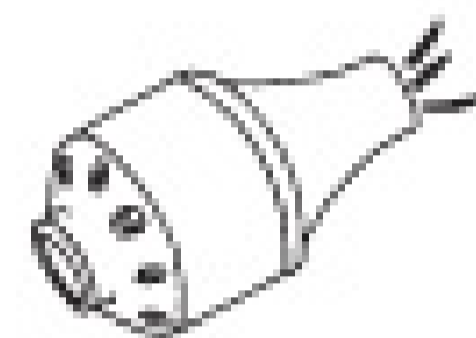
Shark

1"\$480.00
1" Big Shark\$595.00



Radial Bullet

- 3/4"-18° or 35° ..\$50.00
- 3/4"-18°/24°\$53.00
- 1"-18° or 30°\$66.00
- 1"-15° or 30°\$68.00
- 1-1/4"-18 or 35° ..\$85.00

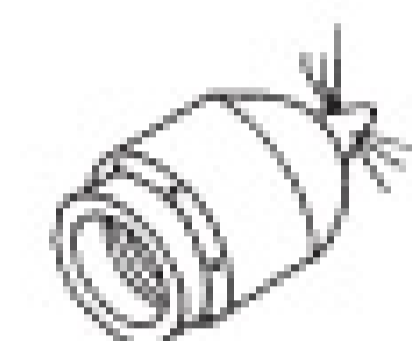


Aluminum Sand

- 3/4"-24°\$139.00
- 1"-17°/24°\$153.00
- 1"-24°\$139.00

Stainless Steel Nozzles

- 1/8"\$30.00
- 1/4"\$33.00
- 3/8"\$39.00
- 1/2"\$54.00
- 3/4"\$59.00
- 1"\$105.00

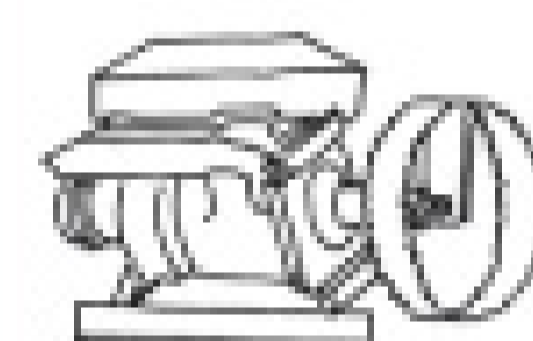


Steel Sand

1"-12°\$70.00

NEW Storm/Culvert Floor Cleaner Nozzles

MANY OTHER STYLES, SHAPES & SIZES AVAILABLE



Root Cutter Assemblies

- Skid Mounted**
 - w/flat blades.....\$847.00
 - w/concave blades...\$889.00
 - w/spiral blades.....\$889.00
 - Donut Mounted**
 - w/flat blades.....\$847.00
 - w/concave blades...\$889.00
 - w/spiral blades.....\$889.00
 - Lateral Mounted**
 - w/flat blades.....\$825.00
 - w/concave blades...\$895.00
- 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"\$42.00
 - 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



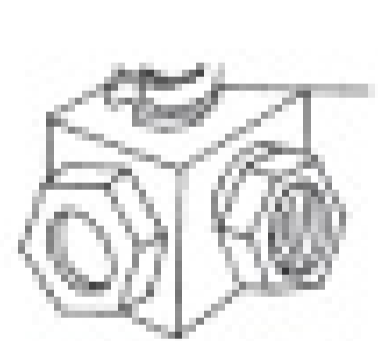
Swivel Joints

T-M® Style

- 90° or Straight, 6000 psi
- 3/4" & 1"\$175.00
- 1-1/4"\$179.00
- 1-1/2"\$453.00
- 2"\$570.00

Ball Valves

- Dyna Quip® Style
- 3000 psi
- 1"\$227.00
- 1-1/4"\$243.00



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



Saw Blades

4"-18"

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



HD Washdown Gun

25 gpm @ 850 psi
1/2" Inlet\$155.00

Parker & Piranha Jetter Hose

1/8"-1-1/4"



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

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

CALL FOR OUR COMPLETE CATALOG WITH PRICES

ARIES INDUSTRIES

IN-LINE CUTTING SYSTEMS FOR ALL APPLICATIONS

DC 70 • 4" - 10" PIPE & ELBOWS

DC 60 • 3" - 6" PIPE & ELBOWS

RAPTOR • 6" - 15" PIPE

FNF • 10" - 24" PIPE

**Sewer Cutting Systems
for pipe preparation
and pipe opening in
buildings, laterals
and mains**

Grinding, Cutting, Opening

Air Motor styles & bits for all applications & materials

Call **800-234-7205** for more information

Visit Aries Industries at the Pumper & Cleaner Expo
in Louisville, Booth #1008



Wisconsin - 1-800-234-7205 • California - 1-888-285-0366
Florida - 1-800-327-4346 • Mississauga ONT - 1-877-730-7010

10

FOCUSED ON THE WORLD'S INFRASTRUCTURE

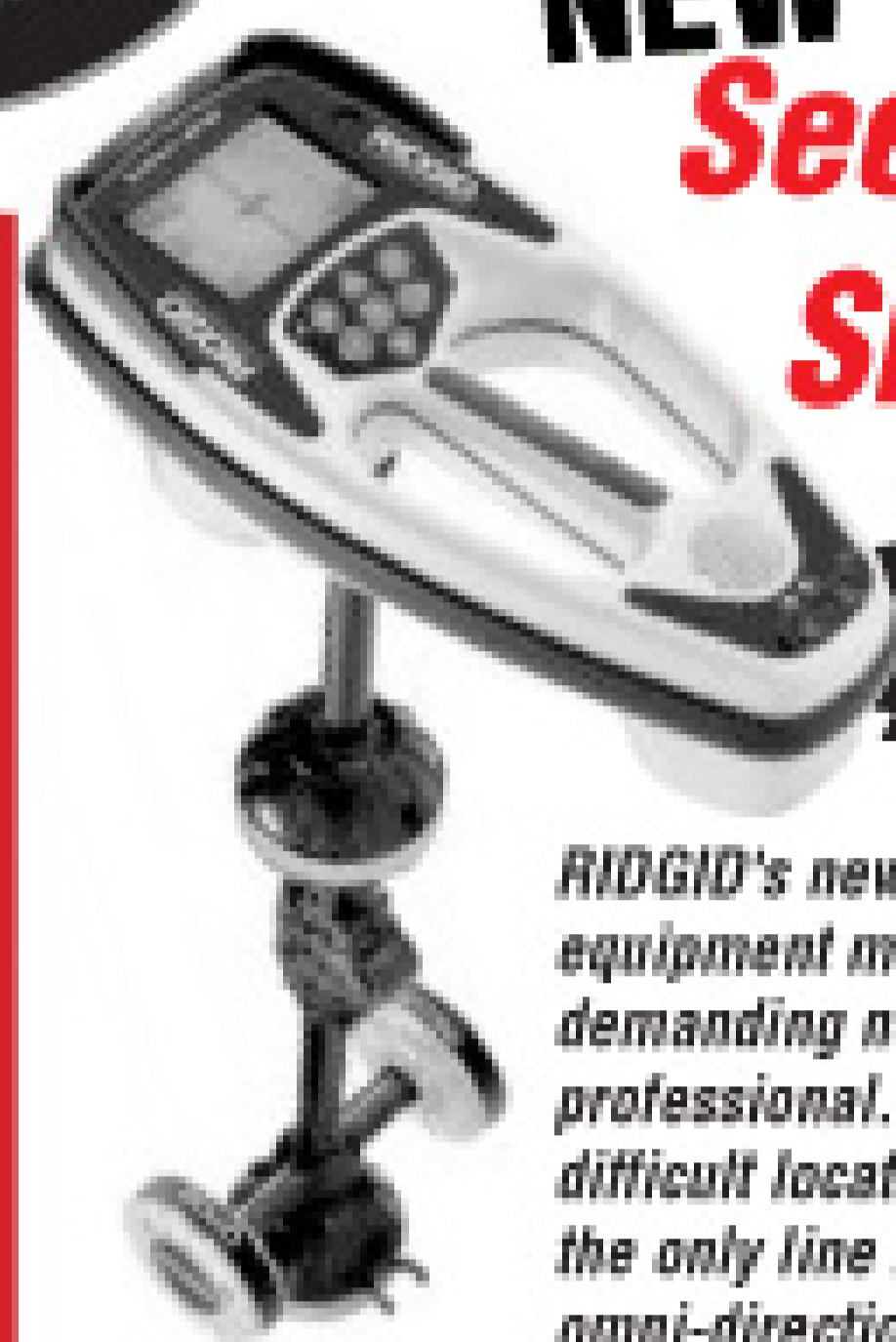
ARIES®

OLDEST NAME IN THE BUSINESS

— Over 100 YEARS OLD —

New Ridgid
Calendar FREE
With \$500
Purchase

RIDGID®



NEW
SeekTech®
SR-60™

NOW AVAILABLE

RIDGID's new line of locating equipment meets the most demanding needs of the locating professional. Built to make even difficult locates easy, SeekTech is the only line locator that uses omni-directional antennas, guidance arrows and an easy to read mapping display to lead you quickly and accurately to the target line.

SeekTech®
ST-33Q™



Introducing the SeekTech® ST-33Q Transmitter from RIDGID® — engineered to take your locating business farther than ever before. In induction mode, the ST-33Q puts more than 8 times the traditional current on lines at 8kHz or 33kHz. That means you'll be able to trace at least 50% farther, even under the toughest locating scenarios.



StoneAge™
Warthog™
Nozzles

6"-36"
Pipes

6"-36"
Pipes

6"-18"
Pipes

4"-8"
Pipes

3"-6"
Pipes

Allan J. Coleman Co., Since 1905 - Call us today! 773-728-2400



"THESE PRODUCTS ARE SO GOOD, WE GIVE YOU OUR ADDRESS!"

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

302

PHCC MEMBER

Sawa

SAME DAY SHIPPING ON MOST SIZES



Savatech Corp | 413 Oak Place Bldg 5-J | Port Orange, FL 32127
Phone: 386-760-0706 | Fax: 386-760-8754 | Toll Free: 888-436-9778
E-Mail: savatech@bellsouth.net | Online Catalog: www.savatech.com

New Size:
32" to 72"
4"/6"/8"
bypass sizes
available

Multi-size blocking
plugs from 4" thru 72"

High Pressure Plugs

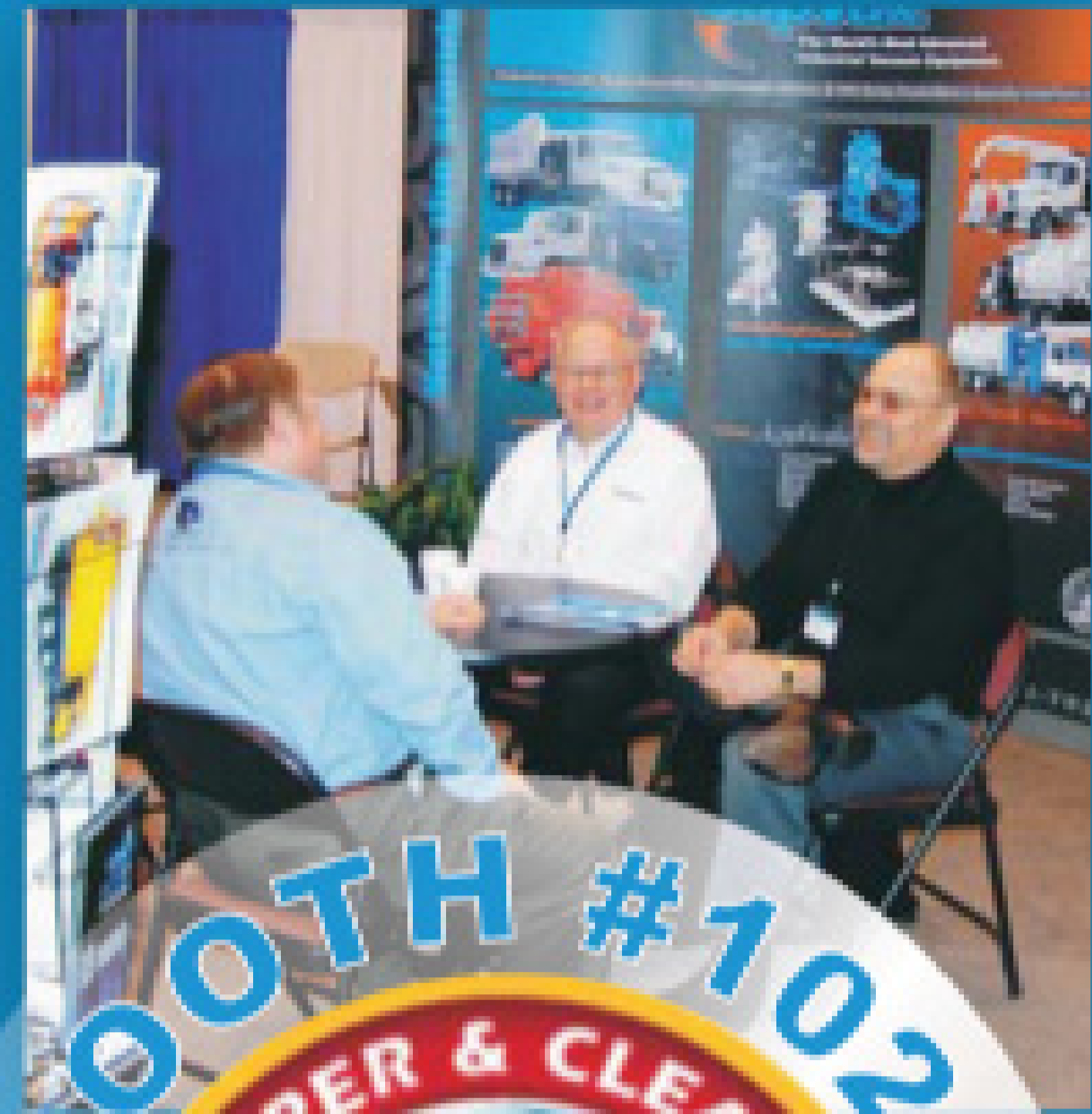
Pillow plugs from 24" up to 108"
(Great for elliptical pipes)

NEW! Poly-lif hoses with inline
gauge and pressure relief valve

***24" to 48" Plugs & 30" to 60"
plugs now available with 6"
and 8" bypass***

Bypass plugs to cover pipe
sizes from 4" to 72" - available
with bypass sizes up to 8"

Small Plumbing Plugs
from 0.75" thru 12"
With or Without
Bypass

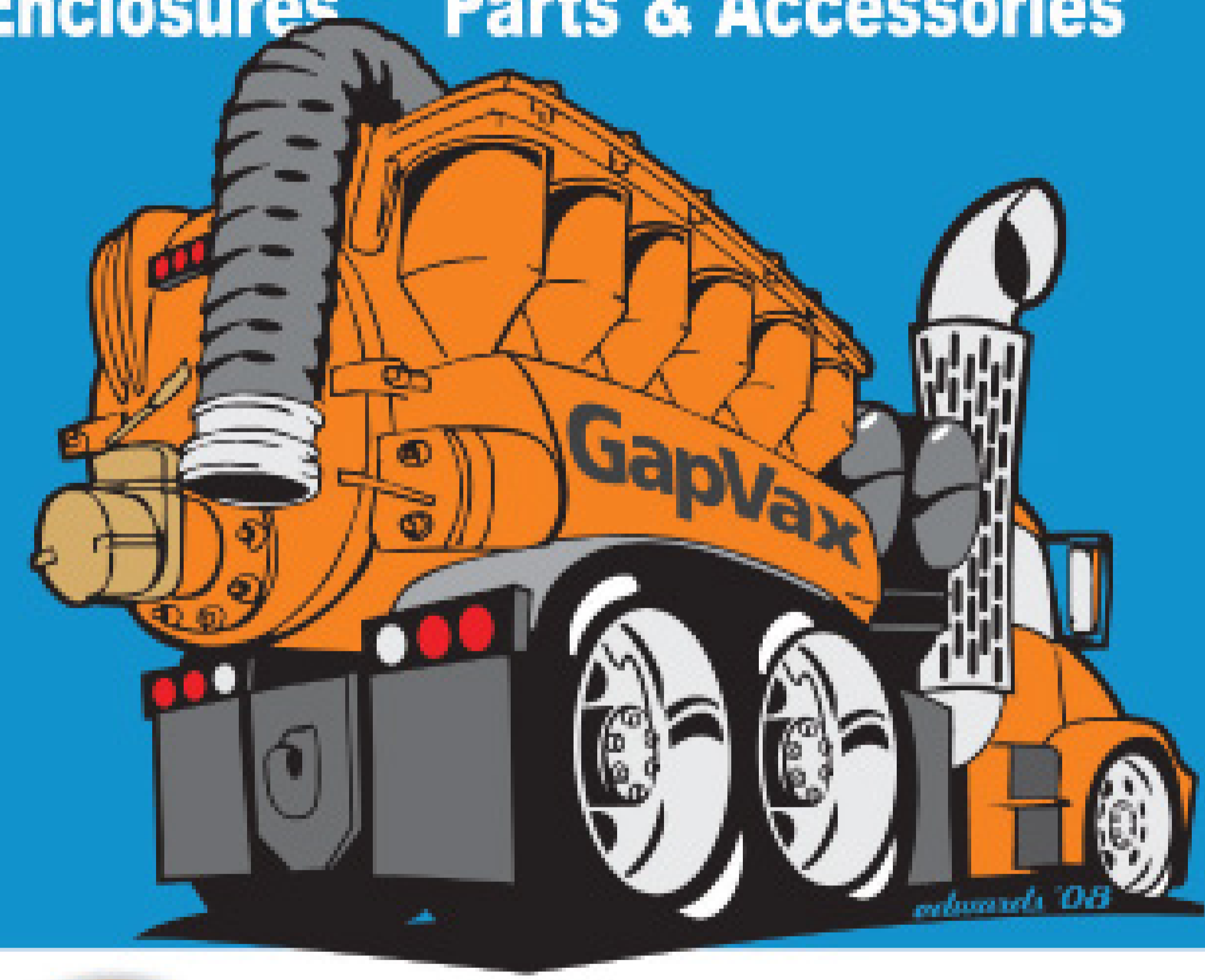


GapVax®

888-442-7829



Industrial Vacuum Equipment WetVacs
 Combination JetVac Trucks Hydro-Excavation Trucks
 Skids Cyclone Trailers Stand-Alone Baghouses
 Sound Enclosures Parts & Accessories



PARTSEXPRESS

*The Perfect Fit
 for all your parts and accessory needs*



www.gapvax.com

SPOKES IN A WHEEL

A proactive five-point program helps the City of Mankato operate a reliable water distribution system and keep water losses to a minimum

By Suzan Marie Chin



For more than two decades, the City of Mankato, Minn., has prided itself on taking a proactive approach to maintaining and repairing its water distribution and fire protection system.

The commitment to providing residents with the highest-quality drinking water and fire protection includes a five-part system of fire hydrant maintenance, fire flow testing, water main valve testing, valve and line repairs and water loss surveys.

Like spokes in a wheel, each component serves its own critical function and also is essential to the overall health of the distribution system. Mankato, a growing community of 35,500 in south central Minnesota, has seen consistent urban development and redevelopment during the past decade. With a customer base of 10,000, the 200-mile distribution system needs constant care and monitoring.

Comprised of lines ranging from 4 to 36 inches, consisting of cast iron, ductile iron and PVC, the system is much like those of most smaller cities. The difference

is that the terrain is hilly, rock strewn and prone to “hot soils.” These features, along with extreme freeze-thaw cycles, create stress on pipes, valves and hydrants. A component-based, scheduled approach helps the Department of Public Works and its Utilities Division manage the system effectively.

Fire protection

Mankato has about 1,900 hydrants. Twice per year, crews flush and test them, performing a detailed check by operating them, checking the caps, and pressure test-



PROFILE:
City of Mankato,
Minn., Department
of Public Works,
Utilities Division

FOUNDED:
1852

POPULATION:
35,500

CUSTOMERS:
10,000

INFRASTRUCTURE:
200 miles of distribution mains,
1,900 hydrants, 5,400 valves

ANNUAL BUDGET:
\$2.5 million

Mankato technicians John Haack (left) and Dan Randolph use a correlator/subsurface leak detection system by Fuji Tecom Inc. to locate a water leak in the water distribution system. (Photography by Gregg Anderson)

ing. If any problems are found, repairs are scheduled according to priority, based on severity. External obstructions such as debris or vegetation that could impede access or functioning are removed during testing.

Whenever a new business that needs a fire sprinkler system is to be built in the city, a crew performs a fire flow test on the distribution system to make sure water volume and pressure are adequate to protect the building. Crews also perform fire flow testing routinely at about

“We perform fire flow testing in specified areas throughout the year, dividing the city into three sections with the goal of testing the entire system over a three-year cycle.”

Anthony Talamantez

100 locations per year to make sure the fire protection system is in optimum working order.

“We perform fire flow testing in specified areas throughout the year, dividing the city into three sections with the goal of testing the entire system over a three-year cycle,” explains Anthony Talamantez, infra-

Checking Mankato’s valve locations using the city’s water distribution map are (from left) technicians Ron Sik, Dan Randolph and John Haack; deputy director of Public Works Mary Fralish; and infrastructure superintendent Anthony Talamantez.

structure superintendent. “We open up one hydrant and measure its flow using a peto gauge, then open another and measure its pressure.

“This tells us how much pressure we lose when there is a maximum amount of water coming from the system and how much fire protection we actually have at those hydrants,” he says. “It also tells us, in the event of a fire, what level of water could safely be pulled without collapsing pipes or creating other infrastructure issues.”

These proactive measures have earned the city an ISO 3 fire protection rating, one of the highest rankings among Minnesota cities. The high rating means potential savings on residential and commercial fire insurance premiums.

Testing the valves

Water main valve health is also essential to a healthy distribution system. All of Mankato’s more than 5,400 valves are tested every five years. The testing involves manual exercising using bell keys, or in the

Members of the Mankato infrastructure team are (from left) Mary Fralish, deputy director of Public Works; Anthony Talamantez, infrastructure superintendent, and technicians Ron Sik and Dan Randolph.



TEAMWORK AND COMMUNICATION

In times when everyone is being asked to do more with less, the City of Mankato Department of Public Works has found a way to lighten the load for its small yet highly resourceful maintenance team.

“I think it’s really important for everybody to know what you’re working toward,” says Mary Fralish, deputy director. “They may not be as motivated if they don’t understand why they are being asked to do the work they are tasked with.”

Teamwork and communication are fundamental philosophies for the department and the five field personnel responsible for maintenance and repair of the water distribution system. To help the staff meet work goals, the department holds daily, weekly and monthly team meetings.

Anthony Talamantez, infrastructure superintendent, says, “Our team takes great pride in their work, primarily because they are closely involved with the decision-making process. Every month we hold a meeting just to discuss the different things that are going on throughout our department, even personal things sometimes.

“Every Monday we all sit down and talk about what’s coming up for the work week,” he says. “Every morning we review in detail the day’s work ahead and discuss issues that may have come up during the previous day. We know it’s important that we come together as a team to come up with solutions. We’re like a family, and when everybody’s on the same page, it just works.”



Dan Randolph takes a peto reading to determine water flow. Also pictured is Anthony Talamantez.



Dan Randolph exercises a water valve.

“In rocky areas, when there is a leak, many times the water will not come up to the surface. It will just remain underground and run through the rocks. So those areas are critical spots for detecting potential water loss.”

Mary Fralish

track information about the system and the various tests. One case in point: Certain types of valves throughout the system indicated large water losses.

“One of the biggest things we found by looking at the report history was a high incidence of leaky valves that have regular bolts on them,” Talamantez says. “We were losing a lot of water with those types of valves. As a result of having information about the system, we now require everything to have stainless steel fittings. This was a huge find.”

The system also helps management prioritize and schedule repairs. Mankato has a diligent but small crew, and being able to set priorities helps them meet their goals. “Each year there are more things laid out for us to accomplish or keep track of and complete with the same number of people,” says

Mary Fralish, deputy director of Public Works. “You need to prioritize, and having a system to analyze and track information and generate work orders has helped a lot.”

Main and valve repairs

Of course, not all repairs can be neatly scheduled. Sudden problems do occur, often through the freeze-thaw cycle. “Our record keeping helps us keep ahead of those areas that we’ve tracked as problematic and we’ll replace lines,” Talamantez says. “But the freeze-thaw cycle creates movement, and that’s when sudden cracks in the cast-iron pipe can occur.”

In those cases, the city uses stainless steel sleeves by the Ford Meter Box Co. Inc. that require minimal trenching to install. The sleeves are fitted with rubber gaskets and are placed on the cracked section of the pipe, much like bandages, to seal the gaps. For pipes that are split lengthwise and require a section to be removed and replaced, crews use PowerMax solid repair sleeves by PowerSeal Pipeline Products Corp.

The city completes the majority of repairs with in-house crews, but occasionally calls outside contrac-

tors to help on large-scale repairs or replacements. Mankato has used Ditch Witch directional boring technology from the Charles Machine Works Inc. for pipe replacement and rehabilitation in hard-to-reach areas or where excavation would be cost-prohibitive or logistically impossible. To date, the city has rehabilitated 12,000 feet of pipe with the technology.

Tracking water losses

Going beyond repairs, the city’s water-loss survey program is aimed at resource conservation and cost containment. It includes monthly monitoring of water use, sounding surveys and data logging surveys.

Every month, the city monitors the amount of water produced by its treatment plant and compares that with the amount actually billed to customers. Differences indicate the level of water that is not accounted for and the revenue the system is potentially losing.

To pinpoint potential water losses, the city uses 10 Permalog leak detectors by Fluid Conservation Systems. These devices are attached underground by a magnet to a water valve’s bell nut. For the survey process, the detectors are deployed

in a specific area for about one week. They are set to "listen" and record data during the early morning hours (starting at about 1 a.m.) for 15- to 20-second intervals.

Each morning during the survey period, crews go to each of the detector positions and pick up all data recordings from the previous evening. The results are then compiled and analyzed to find suspected leaks.

"We perform the survey for a week at this early hour to eliminate any random water use that could be misinterpreted as a leak," says Talamantez. "If we detect a leak sound consistently throughout the week-long test, we'll deploy more sophisticated leak detection devices to pinpoint the nature, location and severity of the problem."

Where a Permalog device detects a potential leak, a correlator/sub-surface leak detection system by Fuji Tecom Inc. is the next step. The correlator is attached to two points (hydrants or valves). The device takes a reading between those two points and gives the location of the leak.

Locations for water-loss surveys are focused in specific areas known to have problems or are situated in rocky terrain. "In rocky areas, when there is a leak, many times the water will not come up to the surface," explains Fralish. "It will just remain underground and run through the rocks. So those areas are critical spots for detecting potential water loss."

In addition to its own surveys, Mankato uses an independent contractor to perform loss surveys using advanced listening devices. The contractor checks throughout the city over a two-week period and records any potential problems or

water-loss areas. All these efforts have reduced water loss by 15 percent.

Leading by example

The Department of Public Works' proactive approach aligns well with the city's motto: Leading the Way. It illustrates how individual, innovative practices can combine to create a leading-edge method for maintaining a water distribution system.

"Our leadership philosophy has accompanied every type of job in the city, and our water distribution maintenance program is just one example of how we are leading the way," says Fralish. "By being proactive with our water-loss surveys and making sure that maintenance is done on a routine, scheduled manner so that nothing is missed, we can feel confident about our system and its ability to serve our community." ♦

MORE INFO:

- 174 Ditch Witch**
800/654-6481
www.ditchwitch.com
- 307 E.H. Wachs Co.**
800/323-8185
www.wachsco.com
- 418 Fluid Conservation Systems**
800/531-5465
www.fluidconservation.com
- 419 Ford Meter Box Co. Inc.**
260/563-3171
www.fordmeterbox.com
- 255 Infor Public Sector**
800/260-2640
www.infor.com
- 420 PowerSeal Pipeline Products Corp.**
800/800-0932
www.powerseal.com

This Is The Nozzle You've Been Waiting For
Patented

Root Rat

MADE IN THE USA
root cutter nozzle

"I specialize in root extraction and own 2 sizes of Root Rats and have found them to be superior in performance." — Jeff, Jenco Inc.



3/4-1" 40-160 gpm/1500-4000 psi **1/2" 7-35 gpm/1500-10,000 psi**

Root Rat Combo Kit
3/4-1 inch root rat combo kit

Chempure's Hot Box
Turns your cold water jet hot

Custom Built Jetters
All sizes of jetters; ask for show specials

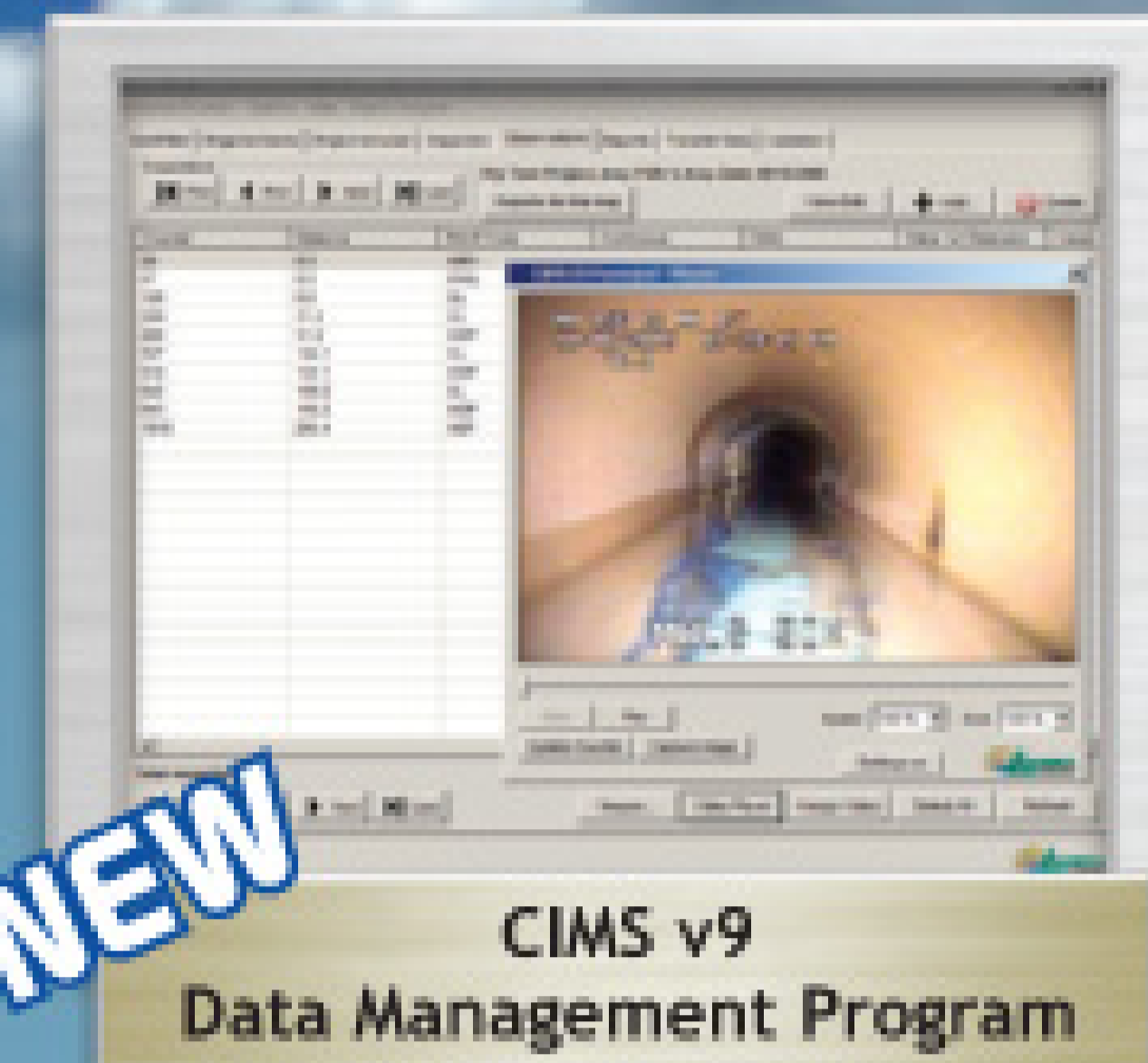
Chempure Products Inc.
1-800-288-7873 International: 330.874.4300
Visa, Mastercard, Discover, Amx Accepted

Booth 9332

61

www.chempure.com

COME SEE WHAT'S NEW



NEW

CIMS v9
Data Management Program

CIMS v9:

The next step in the evolution of our data management software built on a SQL database. This program keeps all of the features our CIMS™ users know and love while adding powerful new tools such as customizable reports and more robust sort, filter, and search functions.



Improved

Main Line Reel

Main Line Reel:

We've added a positive-engagement electro-mechanical clutch which eliminates any possibility of slippage. It also provides automatic cable feeding taking some of the load off the crawler.



NEW

Portable Inspection System

Come see these and other exciting new and improved products from Cobra Technologies at the Pumper/Cleaner Environmental Expo in February.

Portable System:

Our new portable system, now in a much smaller package, has a sunlight readable touch screen and all the features of our truck mounted system.



Improved

Steerable Crawler & Remote Gantry

Steerable Crawler:

We've completely redesigned the drive system to make it more powerful.



www.cobratec.com Sales: 800.443.3761 Email: sales@cobratec.com

WE'RE BRINGING SOME BIG IDEAS TO THE SHOW!



MORE POWER
BETTER PERFORMANCE
MORE VERSATILITY
STRONGER DESIGN

Prototek has been making and servicing locating tools since 1990. Our transmitter receiver systems are the most popular in the industry because they're easy to learn and they are reliable.

We have transmitters that are tiny, huge, versatile, flushable and they'll transmit through just about any material including steel. They're perfect for attaching to pushrods and they work with any receiver, not just ours.

Visit us at **Expo booth 3187** and meet **Scott or Kent**.
You've got questions.
We've got answers.

They're simply the best performing transmitters and receivers in the industry because we've built our business by listening to our best advisers: our customers.

How do we keep making these amazing tools?!

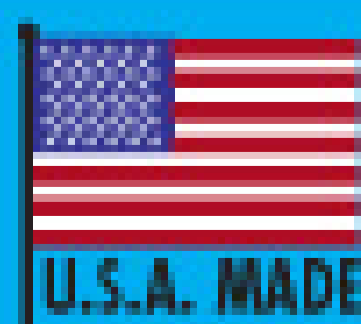


Prototek

800-541-9123

Web: www.prototek.net

Email: prototeksales@prototek.net



67

KEG

Not Just Another Nozzle Company!

If your current nozzle vendor doesn't provide **patented fluid mechanics, outstanding nozzle performance, and free jetter evaluations** with each demo, maybe you should be working with KEG!



8 Jet Floor Cleaner

KEG offers a complete line of nozzles, root cutters, and floor cleaners for all your sewer cleaning needs. Our nozzles feature two US patents for fluid mechanics. These technically superior designs allow our customers to clean more footage per day, using less fuel, less water, and fewer man-hours.



US Patents: 5992432
and 6089243



KEG is a proud member of National Association of Sewer Service Companies

- Save Water
- Save Fuel
- Save Time

Blowing toilets? Let KEG show you how to do more work with less water and fewer mad housewives!



KEG Technologies, Inc.

P.O. Box 3067
Madison, MS 39130

Phone: 866.595.0515 toll free

Fax: 866.595.0517

Email:

kegbusiness@kegtechnologies.net

www.kegtechnologies.net

47



FROM LATERALS TO MAINLINES TO STORM DRAINS. . .

There's so much more you can do when your crews are running RST systems.

- Interchangeable cameras, tractors and crawlers to perform fast, accurate inspections in lines 4" to 200" in diameter and up to 3,000 feet in length
- Cameras feature high intensity white LED lights
- 40:1 Zoom with automatic iris and focus available
- Portable, truck and trailer mount configurations



GET MORE. DO MORE. RST.

Call today for more info about our custom-fit inspection tools for municipalities and sewer service contractors.

VEHICLES | CAMERA SYSTEMS | SOFTWARE

■ EXPO Booth #4069 ■

800 767 1974

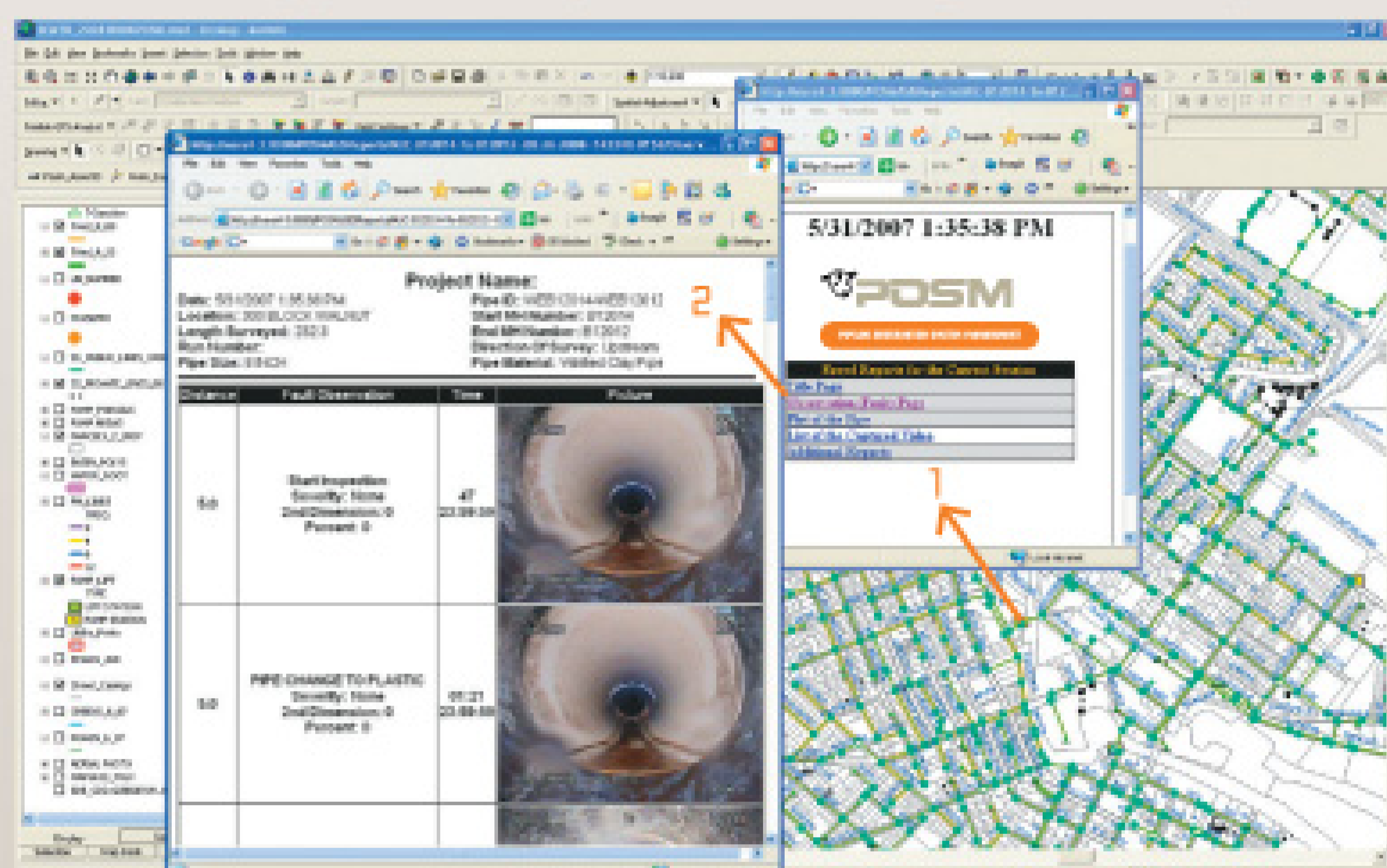
www.rstechserv.com

63

RS Technical Services Inc.
Design and Manufacture of Video Pipeline Inspection Systems

 **POSMA office**
server edition

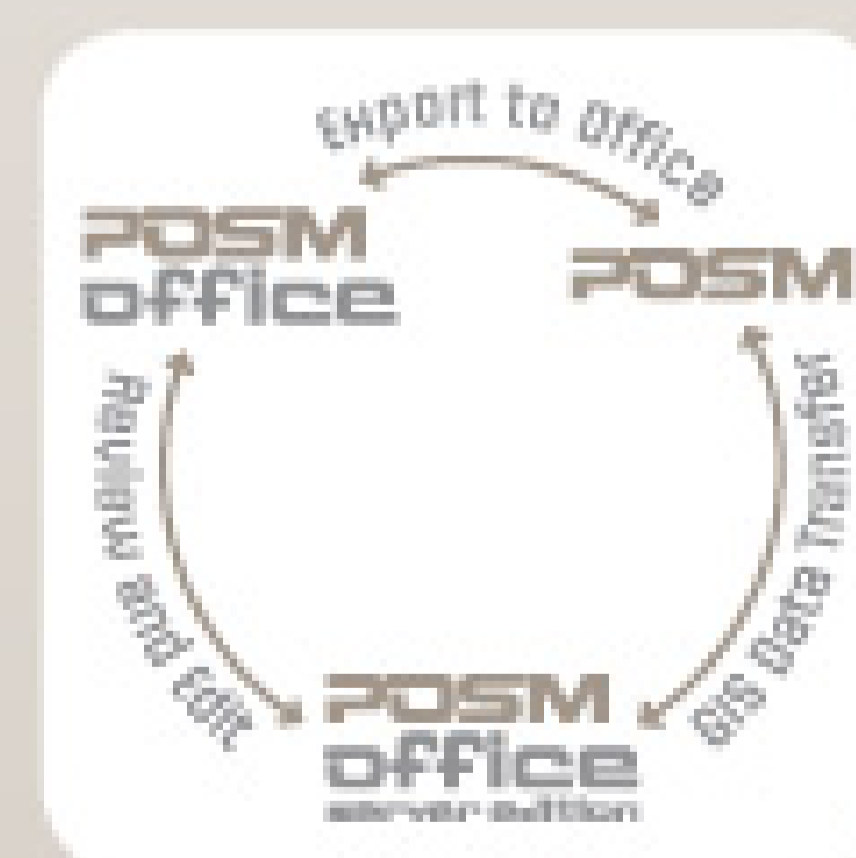
the pipeline inspection data cycle is completed.



No more searching for tapes or DVD's. Simply search in POSM, or click on a map, to view pipeline inspection reports.

HTML linking from ArcMap to a POSM report. XY data is shown on the map, and for each observation.

POSM server stores, organizes, and links all data to GIS.



POSM's pipeline inspection data cycle

Pipeline Observation System Management
Email » info@posm.us \ Website » www.posm.us
Phone » 866-217-9631 \ Fax » 707-238-1478



Come see us at booth #4069 at the 2009 Louisville Pumper & Cleaner International Environmental Expo.

CHEMICAL ROOT CONTROL



VAPOROOTER pioneered **chemical root control** for the sanitary sewer industry in 1968. 40 years later it is still the most effective **chemical root control** product on the market; guaranteed to kill roots on contact and prevent growth for up to 3 years after treatment. Applied by a network of professional, licensed applicators, **VAPOROOTER** is simply the best.



1.800.841.1444  www.VAPOROOTER.com


MyTana


new 2C310
push camera system
inspection has never looked so good

show us your **MyTana Moments** on **YouTube**
code: 2C310mm

call and ask about our new 2C310 and promotions: mention this ad!

746 Selby Ave St. Paul, MN 55104 · Toll Free: 800.328.8170 · Fax: 651.222.1739 · www.mytana.com



 43

MAX-LIFE Manhole Tools

Booths 14026 & 14027

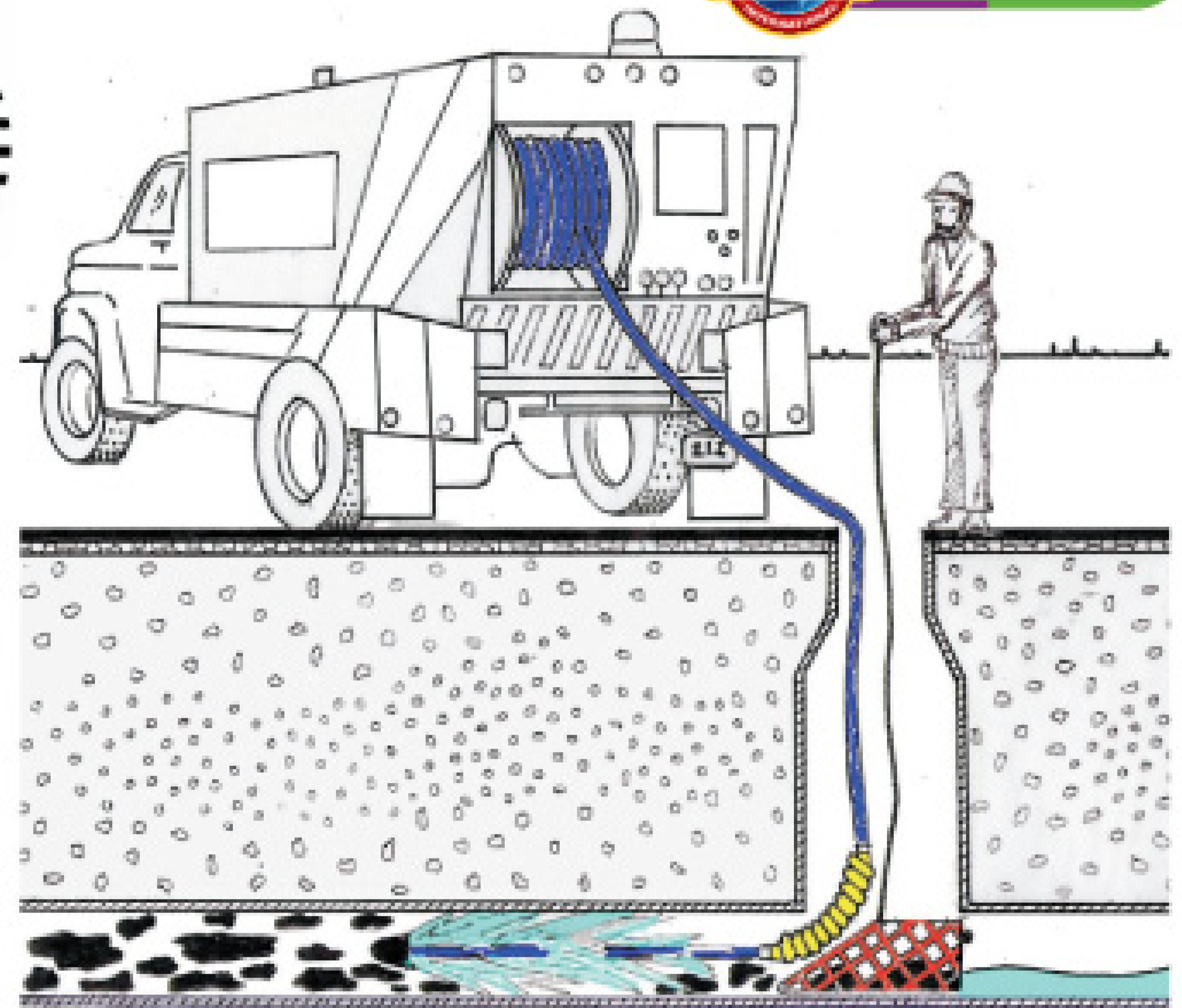
Debris Catchers

Use Debris Catchers with Jet instead of Combo. Ideal where small amounts of debris are expected. Standard **MDC-6** model Comes with 20' of Poly Rope. Available from 6" to 24".



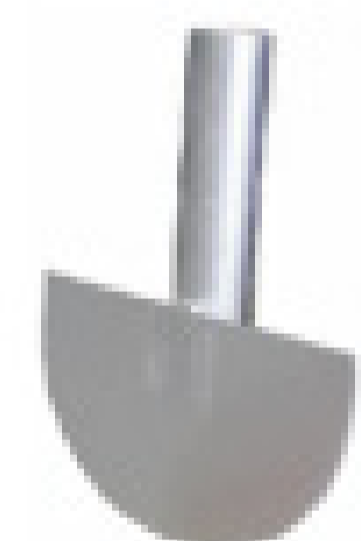
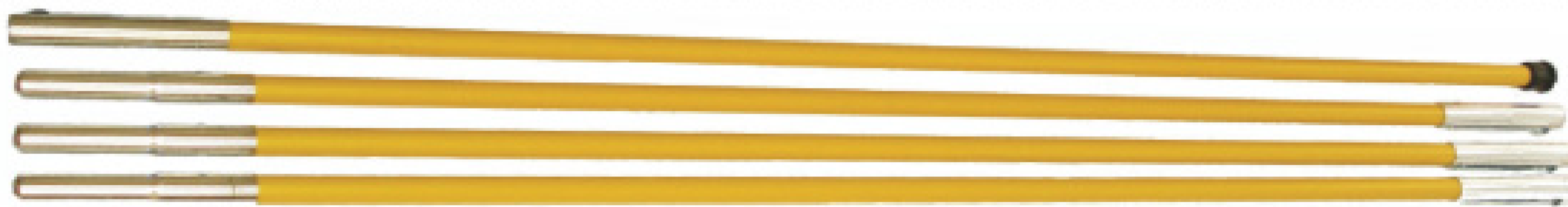
Grit Catchers

MDC-6CW are similar but have half moon bottom around sides and back to stop finer grit and black sand from Flowing thru. Fills with material faster.



MPF-24 Quick Connect Fiberglass Poles

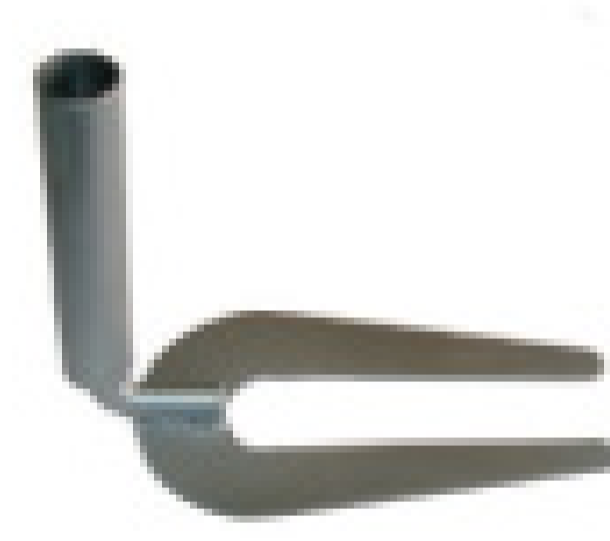
24' pole set used with above Tools and Debris Catchers. Each set Includes 3 ea. 6' male x female and 1 x 6' end pole. These are Light, Strong durable poles with positive lock Aluminum quick couplings. Other lengths available. Use with Debris and Grit Catchers and assortment of tools below.



MGLC-1
Grease Log Chopper. Blade cuts thru heavy pieces.



M3PG-1
Three Prong Grabber. Great for Rocks and Roots.



MHG-2
Horse-Shoe Grabber. Great guiding hose in and out of sewer lines.

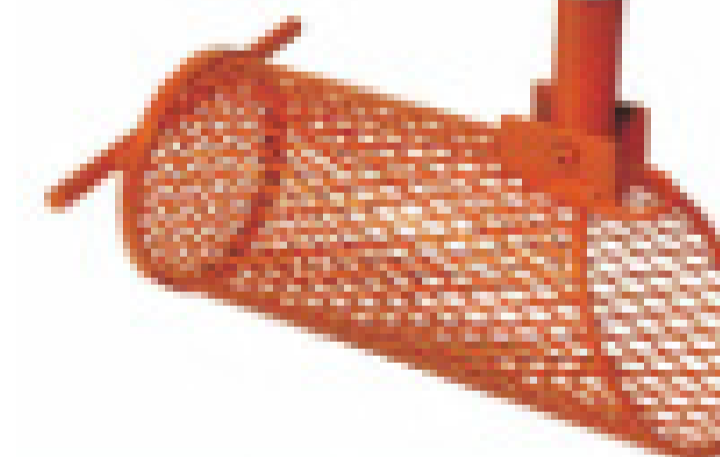


MDS-6
Debris Scoopers Heavy duty construction For 6", 8" and 10" Pipe sizes.



MCG-6
Grit Basket. For use with poles or rope. In sizes from 6" to 24".

Debris Catcher



Debris Catchers and Grit Catchers both can be used with any length of Fiberglass Poles. Provides for positive action of positioning, raising and/or lowering these catchers in manholes.

Grit Catcher

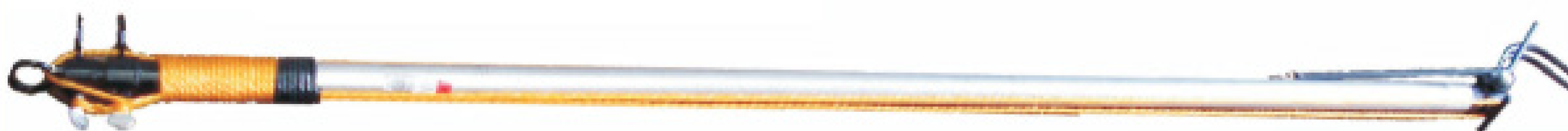


Versi-Clam.

Knock down design, easily assembled from 6' to 25'. One size can be used in different lengths. Ships via UPS, Now you don't have to pay those high trucking charges



MCLAW MAX-CLAW 7' -15' Telescopic Extendable Claw with fiberglass pole extension spring loaded end Claw for Heavy duty retrieval. Jaws stay open and positive rope pull locking systems assure you wont loose your debris.



MDG-1 DEBRIS GRABBER 5' -15' Telescopic Extendable Debris Grabber with Steel body construction and articulating end fork. Rope opens and closes jaws for positive grabbing.

MAX-LIFE MANUFACTURING CORP.

COMPLETE LINE OF SEWER RODDING TOOLS AND EQUIPMENT 888-873-6295 11580 Seaboard Circle, Stanton, California 90680 / FAX: (714) 714-897-2810 www.flexmax.com dhp@flexmax.com

FOCUS: SEWER

STRIKE FORCE

Emergency overflow response in the Sanitation Districts of L.A. County focuses on control and confinement. Speed and organization are critical.

By Jim Force

The call comes in at 10:21 a.m. There's an emergency at South White Avenue and Ninth Street in Pomona. Instantaneously, a team springs into action. Respond. Contain. Remediate. Report.

Trucks roll. Radio waves crackle. In the command center, computer screens beam up GPS points. Personnel are on-site within minutes and have the situation under control in hours, if not sooner.

Fire and rescue department? EMT squad? Police SWAT team? No, it's the collections system emergency response team at the Sanitation Districts of Los Angeles County, racing to a sewer overflow, fixing the problem, and keeping wastewater from contaminating public waterways.

"We may be unique," says wastewater collections section superintendent Doug Walton. "We not only focus on fixing the problem as quickly as possible, we're also committed to containing the spill or overflow, confining it to the sewer system, and preventing it from getting into the public waterways —

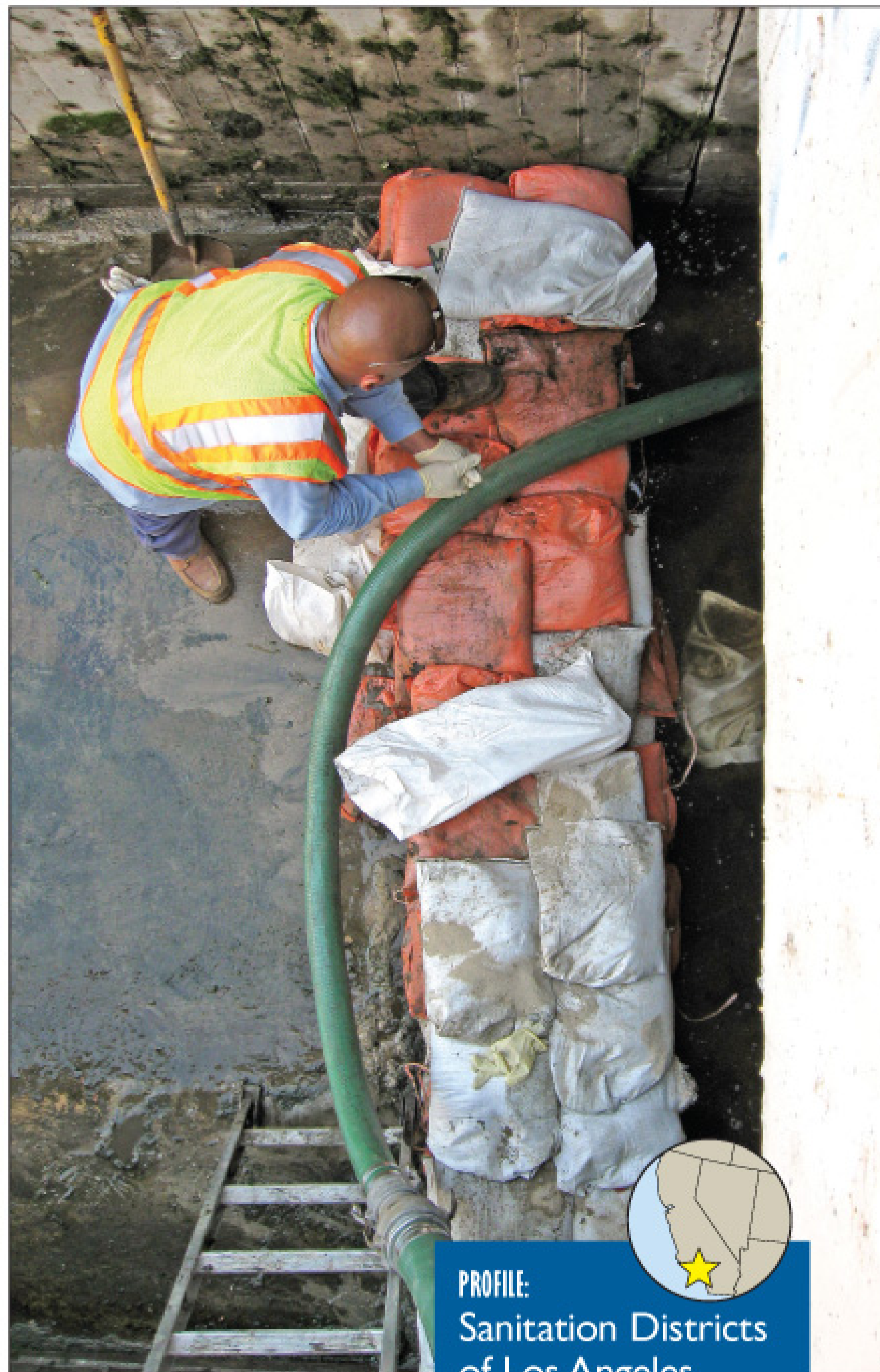
our rivers, and ultimately, the Pacific Ocean."

Walton and Sam Espinoza, wastewater collections systems manager, explain that beach closures caused by high counts of indicator organisms in the water are the last thing the Los Angeles metropolitan area needs. "There can be a significant economic impact here should that happen," they say.

State and federal regulations prohibit wastewater overflows. However, in the L.A. Districts' vast system of sewers, some built in the mid-1920s, failures inevitably occur. The agency is committed to a comprehensive two-pronged program: Stop the overflow, then contain and recover the wastewater discharge. And do both as quickly as possible.

Staying out front

The Sanitation Districts of Los Angeles County serve 78 cities and unincorporated areas with 11 wastewater treatment plants. The collection system includes 9,500 miles of tributary sewers and 1,400 miles of sanitation districts sewers.



In the City of Los Angeles, a sewer overflow that spilled into a storm drain catch basin is contained by Sanitation Districts crews. (Photos courtesy of Sanitation Districts of Los Angeles County)

About 50 percent of the pipes are concrete and 45 percent are clay.

The districts started building its emergency response system more than 10 years ago. "In the old days, we were sometimes accused of not letting the proper authorities know about a spill or overflow," Walton says. "Or, in some cases, we were actually the last people to know about it."

It's much different now. Calls about possible overflows come in

PROFILE: Sanitation Districts of Los Angeles County

POPULATION:
5.3 million

SERVICE AREA:
800 square miles

STAFF:
100-120 (collections)

WASTEWATER VOLUME:
500 mgd

COLLECTION SYSTEM:
10,900 miles of sewers

ANNUAL BUDGET:
\$35 million (collections)

WEB SITE:
www.lacsd.org

to the districts' central alarm center at the Long Beach Main Pumping Plant. The message and the location are transmitted immediately to the Compton Field Office where Espinoza, Walton or the O&M crew on duty forward it via cell phone or handheld radio to the entire collections staff of more than 100 people.

The districts lease bandwidth and have a designated frequency on the county's integrated radio network, and maintain an emergency contact list that includes home phone numbers and emergency 24/7 cell phone and pager numbers. Within minutes, the entire network of people is notified.

At the same time, the call is transmitted to the public health department and the Office of Emergency Services and logged into an electronic database as a service request.

Once the word goes out, "Everybody goes into action simultaneously," says Walton. "Everybody has a role to play."

Using ESRI ArcView maps of the entire sanitary and storm sewer

"We may be unique. We not only focus on fixing the problem as quickly as possible, we're also committed to containing the spill or overflow, confining it to the sewer system, and preventing it from getting into the public waterways — our rivers, and ultimately, the Pacific Ocean."

Doug Walton

systems, the response team pinpoints the location of the spill or overflow and identifies catch basins and storm drains where the overflow is likely to go. The database also reveals any previous incidents in the same area, so the crew can make an educated guess of where the spill is headed. "We've gotten pretty good at this," says Walton.

All-inclusive

That's crucial, because the districts' goal is to respond to the scene within one hour of notification, assess the situation, and notify the responsible agency if the situation was not caused by a problem within the sanitation districts' system.

When the alarm really is a districts sewer overflow, a practiced protocol kicks in:

- Prevent the overflow from reaching the storm drain, if possible.
- Limit public access to the overflow area to prevent public contact with wastewater and any areas contaminated by wastewater.
- Stop the overflow as soon as possible, preferably within one hour of arriving on-site.
- Completely contain the overflow as close as practical to the overflow location to prevent or minimize any environmental impact.
- Completely recover the contained overflow and return it

to the sewer system.

- Clean up the area contaminated by the overflow.
- Repair damaged facilities that caused or contributed to the overflow.
- Gather and compile pertinent information pertaining to the overflow, simultaneous with response efforts, and notify appropriate regulatory agencies of the overflow and response status as soon as practical.
- Conduct investigations to determine the probable cause of the overflow, document the events during the overflow and response activities, identify and implement measures to prevent recurrence.

Although each overflow is unique, the districts respond to most overflows in a standard fashion. Several crews travel to the scene, each under a lead worker or supervisor. One crew is responsible for stopping the overflow, and the others for containment, recovery and cleanup.



Districts crews contained a manhole overflow with sandbags above ground and in an underground storm drain. A vacuum truck was used to pump commingled waters from the storm drain and into a nearby sewer.



In an overflow situation in the City of Glendora, Sanitation Districts crews set up a pumping system to bypass the majority of the flow. A second bypass was placed into service to bypass remaining flow. Crews drained the excavation using two vacuum trucks and cleaned debris from the manhole and sewer pipe to clear the blockage.

EMERGENCY EQUIPMENT

In addition to the normal maintenance and repair equipment, the Sanitation Districts of Los Angeles County maintain a complete arsenal of equipment to support emergency responses. This equipment includes:

- Rodding machines from Vac-Con Inc. to clear pipe blockages.
- Portable engine-driven electrical generators from John Deere for use at pumping plants during power outages.
- Vacuum tankers to transport flow around blockages or to remove wastewater from containment locations in street or storm drains (districts' design with Thompson Tank).
- Emergency submersible bypass pumps from Gorman-Rupp Co., Charles King Co. and Acme Dynamics Inc.
- Filled sandbags and flatbed and boom trucks for making containment dams.
- Front loaders from Case Construction Equipment for emergency earth moving.
- Portable engine-driven centrifugal trash pumps from Multiquip Inc. for bypassing and removal of wastewater from storm drain channel containments.
- Water trucks for cleanup operations (districts' design with T & B Sales Inc.)

Stopping the overflow

When they arrive on the scene, crew members investigate the cause of the overflow, then work to stop it and correct the condition that caused it. They clear pipe blockages using combination trucks, remove any debris from manholes, and divert upstream flows or use vacuum trucks or pumps to bypass wastewater around the blockage or break.

If a failure in a pumping station or force main has caused the overflow, the crew relies on its battery of engine-driven generators to restore power, and uses portable pumps and hoses for bypassing.

“We’ll provide the same level of response on a 5-gallon spill as we will on one of 1,000 gallons. That’s an indication of our dedication and commitment.”

Doug Walton

The districts maintain an overflow response trailer, equipped with portable pumps and hoses, fittings and tools able to bypass up to 450 gpm. For higher flows, the crew uses larger trailer-mounted engine-driven pumps.

Many of the districts’ pumping plants are specially configured for installation and operation of emergency bypass pumps in case the normal sewage pumps are inoperable. These portable bypass pumps are powered by electrical generators and sized to handle peak wastewater flows. Crews can connect the pumps to the force main or to a temporary above-ground force main. If necessary, a portable generator can power the bypass pump.

Individual emergency procedures manuals cover the procedures specific to each of the districts’ 52 pumping plants. Repairs are made as quickly as possible, using the districts’ field engineering section or qualified outside contractors.

Containment and recovery

Just as vital as correcting the

All areas affected by this overflow are cleaned with potable water, and the storm drain is flushed with about 5,500 gallons of potable water. All wash water and wastewater was collected at the containment site and returned to the sewer. Dye testing confirmed that all spilled wastewater was fully recovered.

problem, the emergency response team works to contain and recover any wastewater overflow and prevent it from entering waterways. “Over the years,” says Walton, “we’ve done our best to keep overflows out of our public waterways.” Last year, for example, the districts experienced 10 overflows and in seven of those incidents prevented any wastewater from escaping.

The first line of defense is to keep the overflow from reaching the storm drain system. Crews dam the overflow path with sandbags in the street gutter and recover the impounded water with a vacuum truck or jet-rodder. They may use sandbags to divert the overflow into a nearby sewer manhole.

“We’re working against the clock,” says Walton. Sometimes, due to slow reporting of an incident, or the city’s infamous traffic congestion, overflows do enter the storm drain. When that happens, the response team identifies the best spot in the downstream storm drain system to contain the flow. That decision is based on the time of the overflow, its route through the storm drains, time needed to erect a containment dam, accessibility for personnel, and proximity to a sewer.

The team uses sandbags to build the containment and trap the overflow. “Ideally, we contain the overflow underground, rather than daylight it, but we don’t always have that luxury because of confined-space access and safety considerations,” says Walton. “Plus, we can enter a storm drain system in dry weather only.”

Once the overflow is under control, the crews recover all impounded wastewater and return it to the sewers. They remove debris and flush the affected areas with potable water from a vacuum truck or water truck, then direct



Districts crews construct a temporary above-ground 12-inch aluminum bypass piping system to limit a spill from a damaged force main. Crews also placed sandbags at nearby catch basins in case the overflow breached the containment area.

that water to the sewers as well.

When necessary, additional potable flush water is marked with a nontoxic dye and is allowed to flow into the overflow site. When it arrives at the containment site, crew members note the travel time and know for certain that they have recovered all the overflow and flush water. “We want to be sure we’ve caught it all and nothing has escaped from the site,” says Walton.

Finally, the crew removes all sandbags and completes the cleanup in the storm drain system. In rare cases where wastewater has reached a natural watercourse or

other area accessible to the public, the collections section works with other jurisdictional agencies on additional cleanup measures. Any private property contaminated by the overflow or spill is handled by a professional restoration company hired by the districts.

Concern for health

The sanitation districts cooperate with local law enforcement and public works officials to prevent public contact with overflows and to ensure security of spill sites. The response team contacts members of the public who may have been exposed to raw sewage, informing

them of health risks and advising them if they should vacate their property as a precaution.

At the same time, team members determine the path and final destination of the spill and potential public exposure. If wastewater from an overflow is ponding in a location that can be isolated, personnel set up barricades. Traffic control keeps vehicles from entering locations where the overflow has contaminated streets.

If an overflow might reach receiving waters, samples are taken to evaluate the potential impact on water quality. The samples are analyzed for total coliform, fecal coliform, and enterococcus and other constituents as appropriate, based on the nature of the receiving water and the spilled wastewater.

The districts report all overflows to the several regulatory agencies having jurisdiction in California. After cleanup, districts personnel review the situation to determine if maintenance should be increased or altered. Follow-up CCTV inspection verifies complete removal of blockages.

So, what has been the biggest test for the districts' emergency response team? Any five-alarm situations? "Three or four years ago a force main failed at one of our pump stations," recalls Espinoza. "We couldn't turn off the pumping station, as that would have flooded out the incoming lines.

"We put a crew in front of the catch basin to keep the flow out of the storm drain system and placed other crews at various locations to draw water from the incoming sewer lines to minimize the flow into the pump station."

Then, a team rigged a 1,300-foot bypass line from the pump station to a downstream sewer and brought in a contractor to excavate under a parking lot to repair the force main. "We had a lot going on at once, building the bypass line, stopping the flow, setting up containment, getting the contractor on-site," Espinoza says.

Walton and Espinoza point out, though, that whether the overflow is big or small, the approach is the same. "We'll provide the same level of response on a 5-gallon spill as we will on one of 1,000 gallons," says Walton. "That's an indication of our dedication and commitment." ♦

MORE INFO:

- 421 ACME Dynamics Inc.**
800/622-9355
www.acmedynamics.com
- 425 Charles King Co.**
562/426-2974
- 220 ESRI**
909/793-2853
www.esri.com
- 147 Gorman-Rupp Company**
419/755-1011
www.GRpumps.com
- 422 Multiquip Inc.**
800/421-1244
www.multiquip.com
- 423 T & B Sales Inc.**
909/357-8591
www.tandbsales.com
- 424 Thompson Tank Inc.**
800/421-7545
www.thompson-tank.com
- 6 Vac-Con Inc.**
904/284-4200
www.vac-con.com

GET MORE JETTER FOR YOUR DOLLAR!

We include all the options, others charge extra!



Booth 3069

4 gpm @ 3000 psi portable JS3040 at \$2199



New Van Mount models with all the options starting at \$8799



Trailer models starting at \$6199



See current models and pricing on the web or call us at: www.camspray.com 97 800-648-5011

Introducing Lindhorst Nozzles



State of the art conical ceramic inserts

The All Star Kit is a complete self contained case featuring all the best nozzles available in each class. Arm your operators with a complete arsenal to deal with any potential line condition.



				
LHD-30.16 Chisel Point Use: Blockages of all types Features: • 8 Rear jets for maximum thrust to ram blockages • 4 forward jets to clear stubborn blockages • Aggressive chisel shape & tool steel blasts through obstructions	LHD-10.16 Rotating Nozzle Use: Cleaning crowns, general cleanup of newer installations Features: • High speed spinning barrel scours crowns effectively • Excellent cleanup of newer lines plus PVC • Right angled cleaning jets direct maximum force to the pipe wall to tear away grime	LHD-40.16 Radial Nozzle Use: Every day workhorse Features: • 8 rearward dual angled jets for optimal coverage & cleaning power on the pipe wall • Optional forward jet allows for forward cleaning (shipped plugged)	LHD-20.16 Grenade Use: Main Line Cleaning especially larger lines Features: • 10 rearward dual angle jets maximize cleaning & minimize streaking • Massive 3"x6" size for stability in larger lines • Aggressive jet design creates exceptional vortex vacuum action for maximum finish cleaning	LHD-60.16 Torpedo Use: Long pulls and hills Features: • Aluminum lightweight body maximizes velocity • Used for difficult long runs & hills, this is the ultimate pulling nozzle • Low cost hardened steel insert design

Superior[®] SMOKE



Booth 6141

Classic or Fluid

Only Superior offers Both



Maximizing your Smoke Testing results for over 45 Years!

Booth 6141 70 

www.SuperiorSignal.com 1-800-945-TEST

Introducing The Best In German Engineering And American Design

LINDHORST WORKHORSE NOZZLES

Conical ceramic inserts hold their dimension longer, directing maximum energy at the wall of the pipe. Debris explodes on contact. The finest German tool steel and high quality finish, maximize your horsepower!



Booth 3059



702.324.2244

www.Lindhorstnozzles.com

Dealer inquiries invited.

138

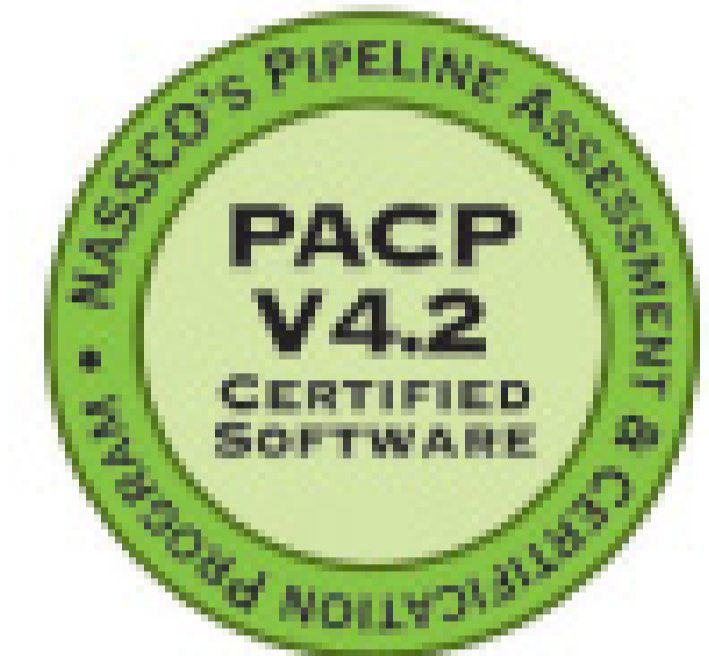
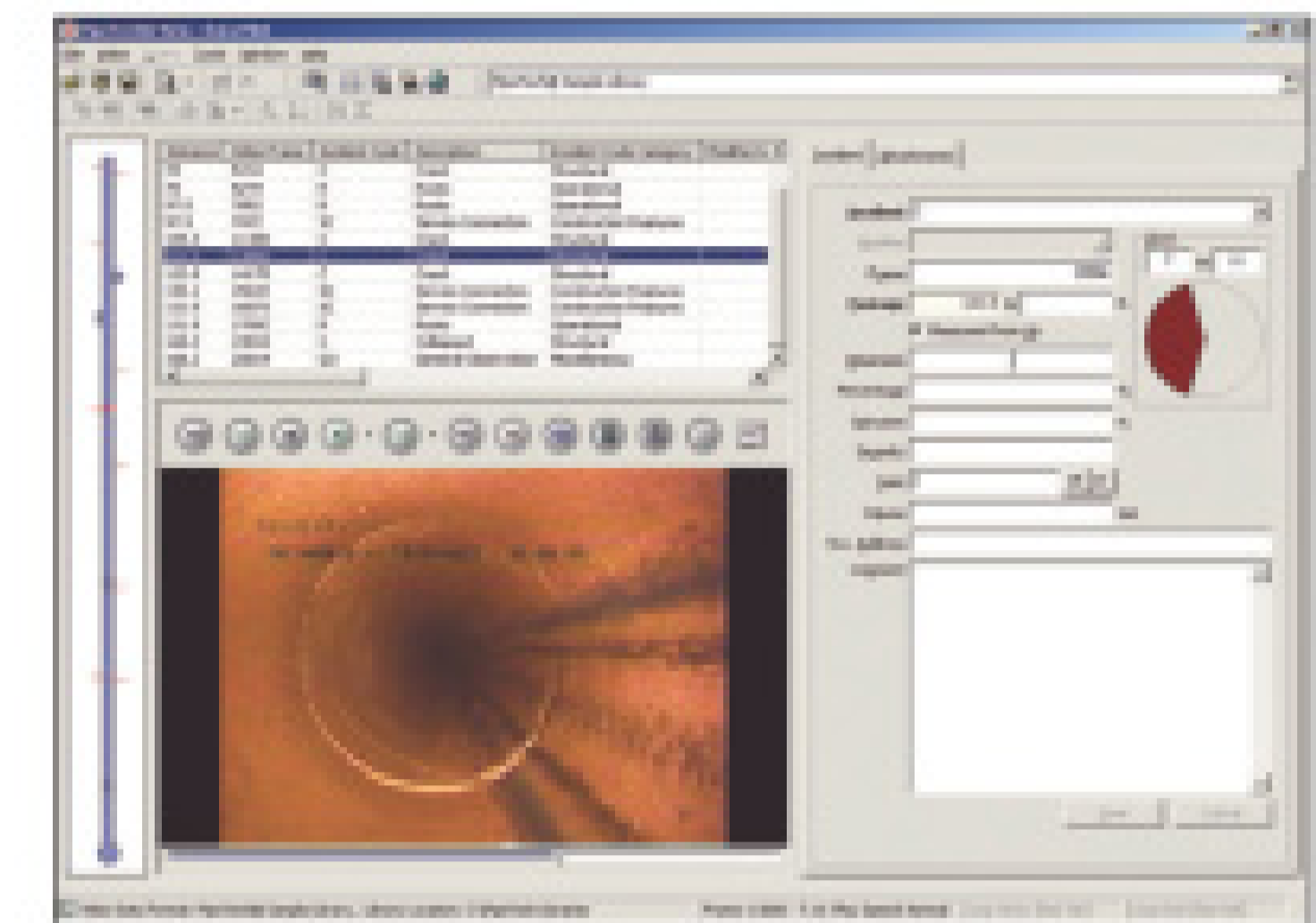


Booth 56

PACP Certified

It's Time to Go Digital!

Digital Pipeline Inspection Software



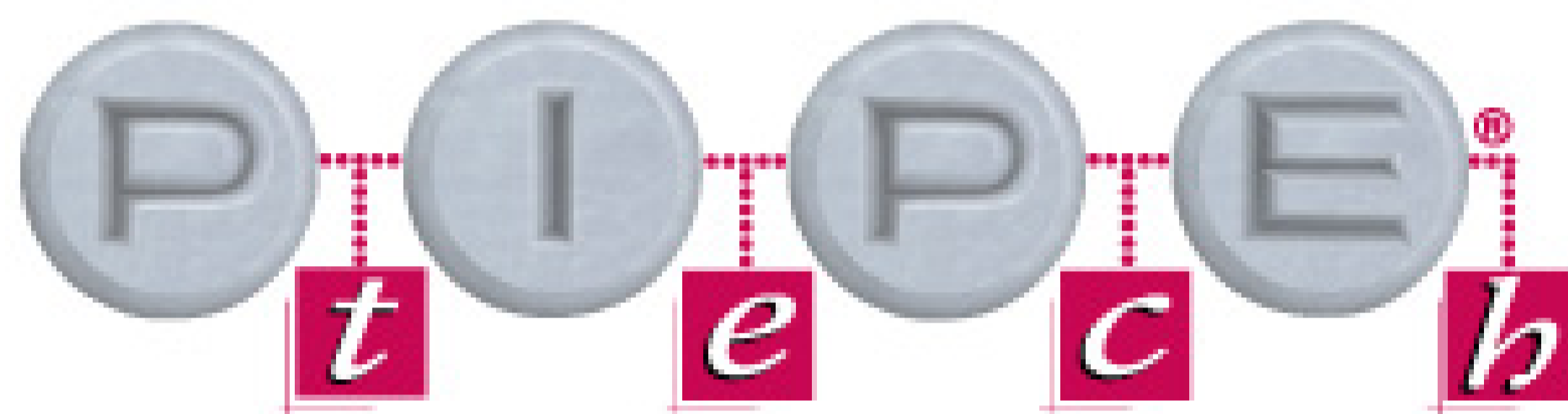
259

Empower yourself today with The PipeTech® Software Suite. Capture real-time digital video and log defect observations using the industry's fastest, most user-friendly system. Seamlessly link your GIS and Asset Management software and discover the pure power of PipeTech. We're leading the way... come join us.

Swift, Easy, Powerful

- Link GIS Maps & Inspection Videos
- Integrate PipeTech and Asset Mgmt Systems
- PACP Certified
- Lateral & Manhole Inspection Modules
- One-Touch CD & DVD Burning
- Customizable Reports
- Patented Point & Click Video Navigation
- Works With Any Camera Equipment
- Dedicated Support & Development Staff

For More Information...
Call 800.262.7817



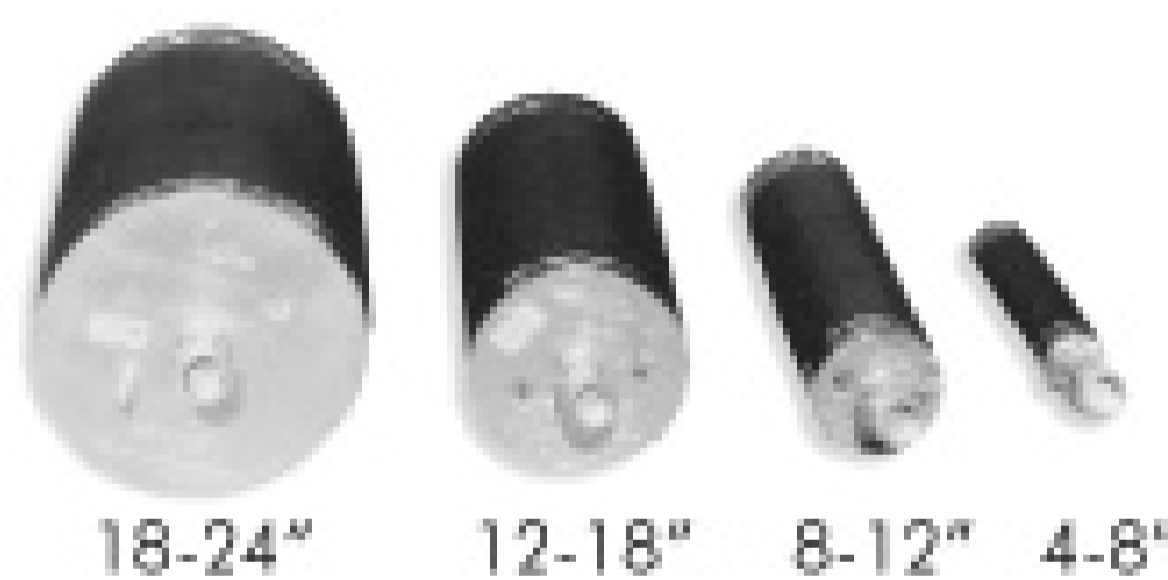
by Peninsular Technologies

555 Ada Dr SE P.O. Box 728 Ada, MI 49301 www.pipetech.tv sales@pipetech.tv

Proudly Developed and Supported in The USA

"Your One-Stop Stopper Shop!"

FOR 31 YEARS – HOME OF THE ORIGINAL
J PIPE PLUG & NB BAG/PILLOW DESIGN STOPPER
[SINGLE SIZE OR MULTI SIZE PIPE STOPPERS 4" & UP]



18-24" 12-18" 8-12" 4-8"

J PLUGS

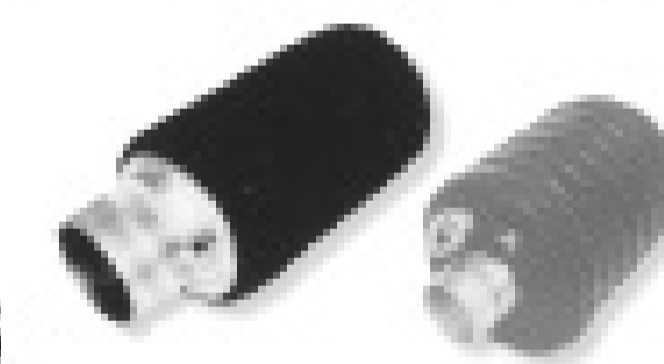
- Four J-Plugs do the job of 12 plugs
- Field repairable
- Above ground installation



NB MULTI SIZE BAG/PILLOW STOPPERS

- Great for elliptical & other non-round applications
- Natural rubber construction
- Also available with Flow Thru

SINGLE & MULTI SIZE PASS THRU PLUGS



MULTI SIZE PLUGS & MULTI SIZE LEAK LOCATORS



SINGLE & MULTI SIZE TEST PLUGS



COMPLETE LINE OF SEWER & DRAINAGE TOOLS AVAILABLE

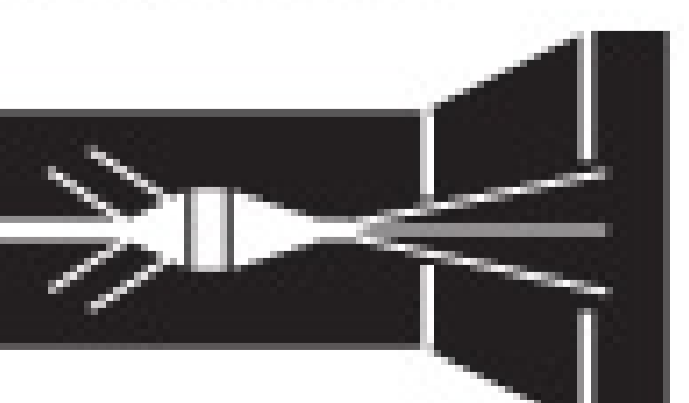
disc plugs | high pressure plugs | large inflatable pipe plugs | pipeline testing & acceptance plugs | pneumatic by-pass plugs

SEWER EQUIPMENT CO. OF FLORIDA, INC.

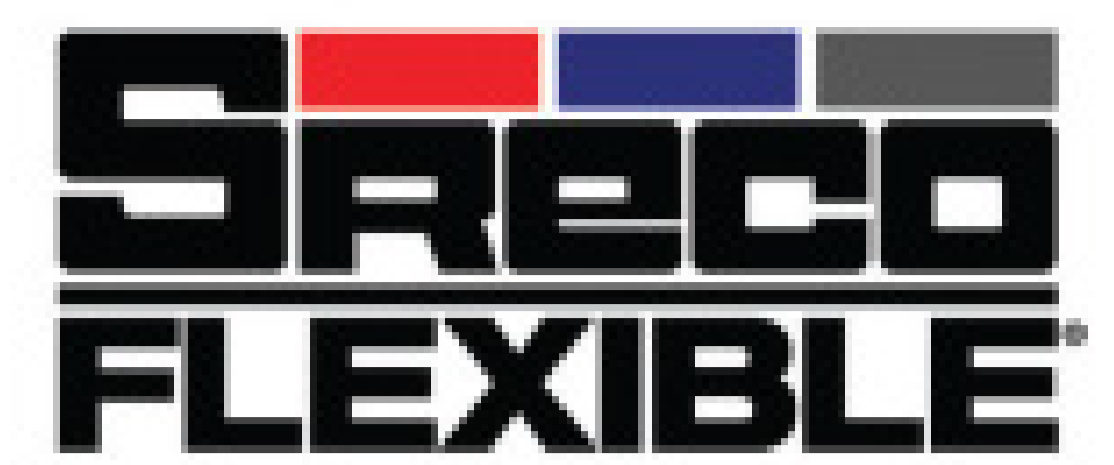
P.O. BOX 186 | 1102 N. DIXIE FREEWAY | NEW SMYRNA BEACH, FL 32170-0186 USA
IN FLORIDA 800.225.2952 | OUT OF FLORIDA 800.635.2323 | IN CANADA 800.328.3318
FAX 386.427.4552 | E-MAIL sewerequip@worldnet.att.net | WEB SITE www.sewerequipmentco.com

COMPLETE LINE OF SEWER MAINTENANCE TOOLS

139



Check Out What's New From the
Industry Innovator for Over 75 Years



**POWER
CONTROL
PRECISION**

SRECO Flexible...
the equipment you need
to tackle tough cleaning
and maintenance jobs
“inside” and “out”

See these
products and
more at our
interactive
exhibit at
the Pumper &
Cleaner Expo



Versa Vac 1000 PD

Precise, Clean and Quick Excavations

Multi-tasking versatility is yours—easily clear debris from sanitary and storm sewer manholes, clean catch basins, safely uncover underground pipes or utility cables and more.

- ✓ 15 feet of vacuum pull depth
- ✓ 4 gpm / 3500 psi water pump
- ✓ 1,000 gallon debris tank
- ✓ 360° fully hydraulic boom
- ✓ wireless remote control
- ✓ retractable reel

Mechanical Rodding

Energy Efficient Cleaning

Our versatile non-jetting solutions give sewer cleaning pros an alternative to root cutting and debris removal. These units can be equipped with a wide variety of pipe cleaning tools to increase cleaning efficiency. Technologically advanced design features double robotics for greater operator control and safety.



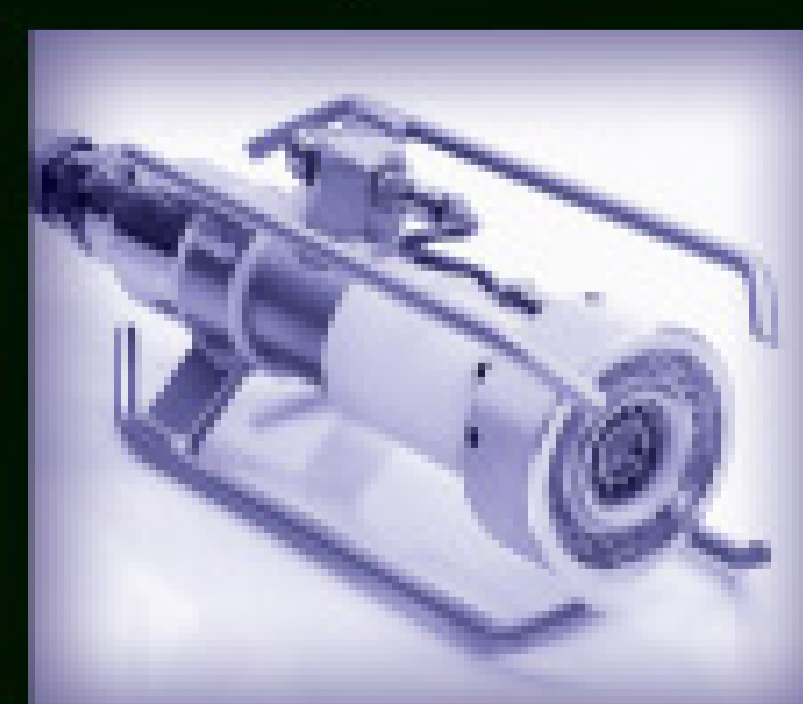
HV2000 Truck Jet

Hy-Velocity Sewer Flushing Machine

Compact and highly maneuverable, the HV 2000 is ergonomically designed for single person operation with numerous features and options to help operators efficiently clean lines 4” to 24” in diameter.

- ✓ 65 gpm at 2000 psi
- ✓ water carrying capacity is customizable
- ✓ up to 1000’ of high pressure hose capacity
- ✓ high pressure triplex pump

Call today for more information about these products and our complete range of wastewater collection systems maintenance solutions.



SRECO Flexible...Seventy-Five and More Than Alive!

Toll Free: 800.421.6536
310.606.9009 | 310.335.0124 f
www.srecoflexible.com

Booth #1040

SEE IT ALL!

Exhibitors offer a hands-on look at the latest services and technology

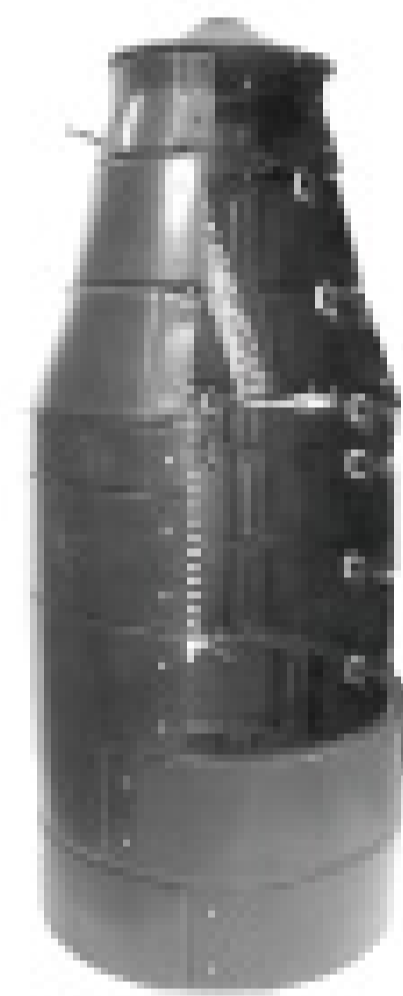
By Ed Wodalski



How do you improve on the environmental service industry's largest-ever exposition? We believe it's by providing you with more ideas and more products than ever before. Whether you're a first-time visitor or long-time guest, the 2009 Pumper & Cleaner Environmental Expo is your opportunity to share concerns and seek solutions from experts around the world. With thousands of new products covering nearly one million square feet of exhibition space, Louisville, Ky., is your destination for the services and technologies needed to become more efficient and more profitable. To help plan your visit, here's a look at some of the products and services you don't want to miss.

Infratech

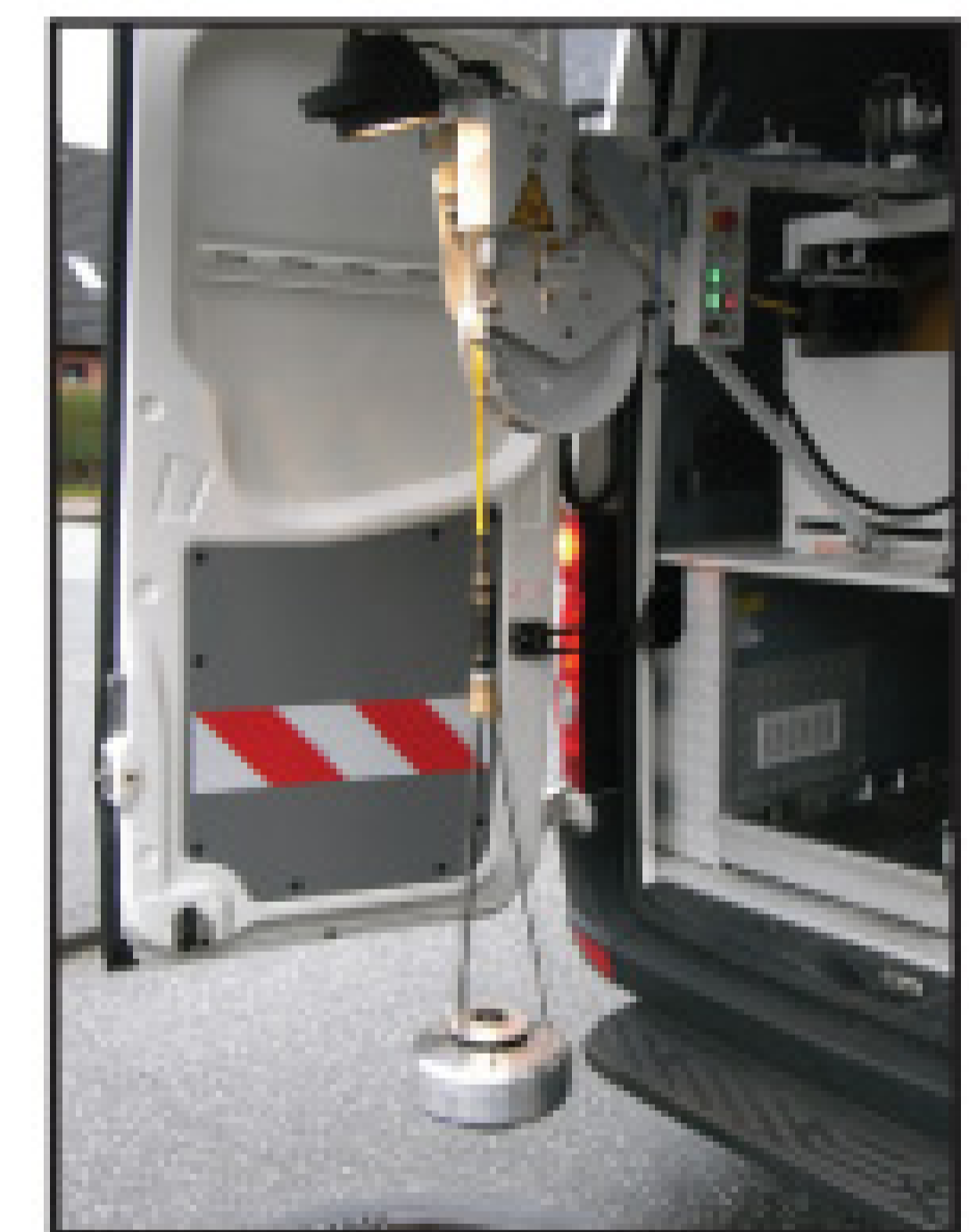
Monoform is an ABS interior manhole forming system for the pouring of new concrete walls and bases for complete rehabilitation of existing manhole structures. Restoration is completed without traffic detours, external sewage bypassing and disruption to adjacent utilities. Custom forms are available for larger structures, such as lift station rehab or retrofit. Infratech offers Monoform rehabilitation as a service with its own crews or can provide the forming system to be used by others. On-site training is available. 763/428-6488; www.infratechonline.com; Expo booth 13035.



consistent, uniform flow. Compact and field tough, the monitor offers one-button operation even while wearing gloves, and tamper-proof user options. Other features include visual, vibrating and audible alarm indicators as well as low, high TWA (time weighed average) and STEL (short-term exposure limit) alarms. 403/248-9226; www.gasmonitors.com; Expo booth 6147.

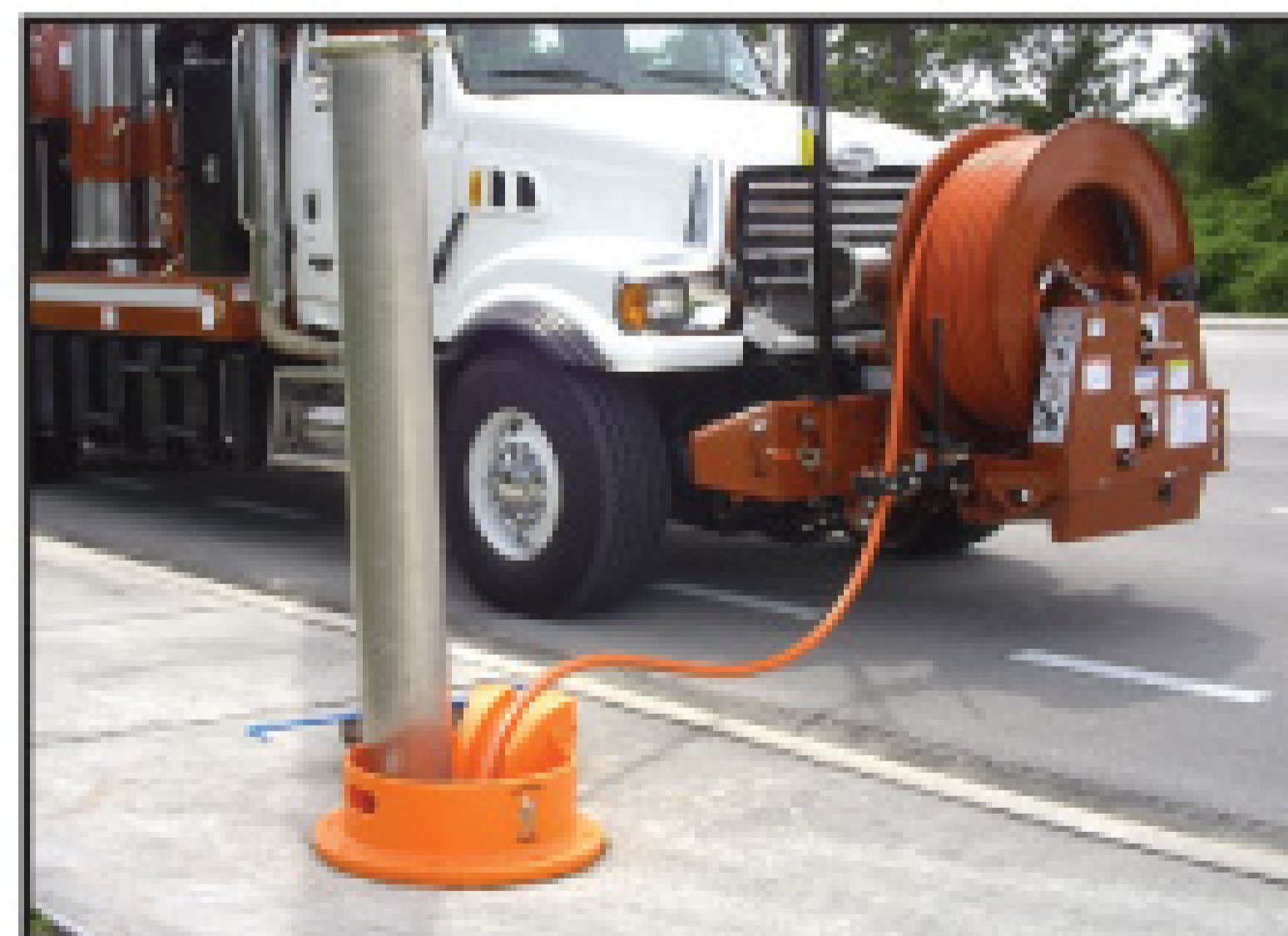
RapidView LLC

The Panorama SI manhole inspection system features inspection speeds of up to 14 inches per second, 100 percent coverage, geometric measurements from any point inside the manhole, laser depth measurement, 225 feet of cable and capabilities from 10-inch diameter manholes and larger. Software enables users to view the manhole from any angle and any position, creating a virtual reality view that can be accessed from any computer at any time. The system automatically generates a three-dimensional model of the inside of the manhole that can be rotated, viewed, measured or output to a CAD file for further analysis. 800/656-4225; www.rapidview.com; Expo booth 2130.



Manhole Guard

The brightly colored Manhole Guard is designed to enhance open manhole safety. The durable, lightweight plastic cylinder minimizes liability as it reduces the chance for slips and falls by personnel and pedestrians into open access points. Rising 6 inches above the surface opening, the guard fits a wide range of hazardous openings. Custom sizes, colors and shapes are available. 800/782-4134; www.manholeguard.com; Expo booth 4130.



A.W. Cook Cement Products

CemTec mortars for the rehabilitation of manholes, wet wells and concrete pipe include microsilica and calcium aluminate mortars as well as hydraulic cement, rapid setting repair and shotcrete. The prepackaged mortars have rapid strength gain and can be hand applied or sprayed through a nozzle or spin-casting device. 706/654-3677; www.awcookcement.com; Expo booth 6057.



BW Technologies by Honeywell

The GasAlertMax XT multi-detector simultaneously displays up to four gases, including hydrogen sulfide (H₂S), carbon monoxide (CO), oxygen (O₂) and combustibles. The unit features a non-intrusive integrated sampling pump and SmartSample diaphragm pump technology to ensure a



EXPO PRODUCT PREVIEW

Industrial Magnetics Inc.

The Manhole Cover Lift System has been redesigned to also lift septic tank lids. The dolly features an adjustable four-position hook and a four-length retractable handle with three angle positions - 90, 105 and 120 degrees - enabling the operator to maneuver up to 400-pound lids. The chain extension allows for the removal and replacement of lids as far down as 24 inches. Dollies are available in either steel or aluminum. Both models are foldable and available with 6-, 10- or 12-inch-diameter wheels. 800/662-4638; www.magnetics.com; Expo booth 6131.



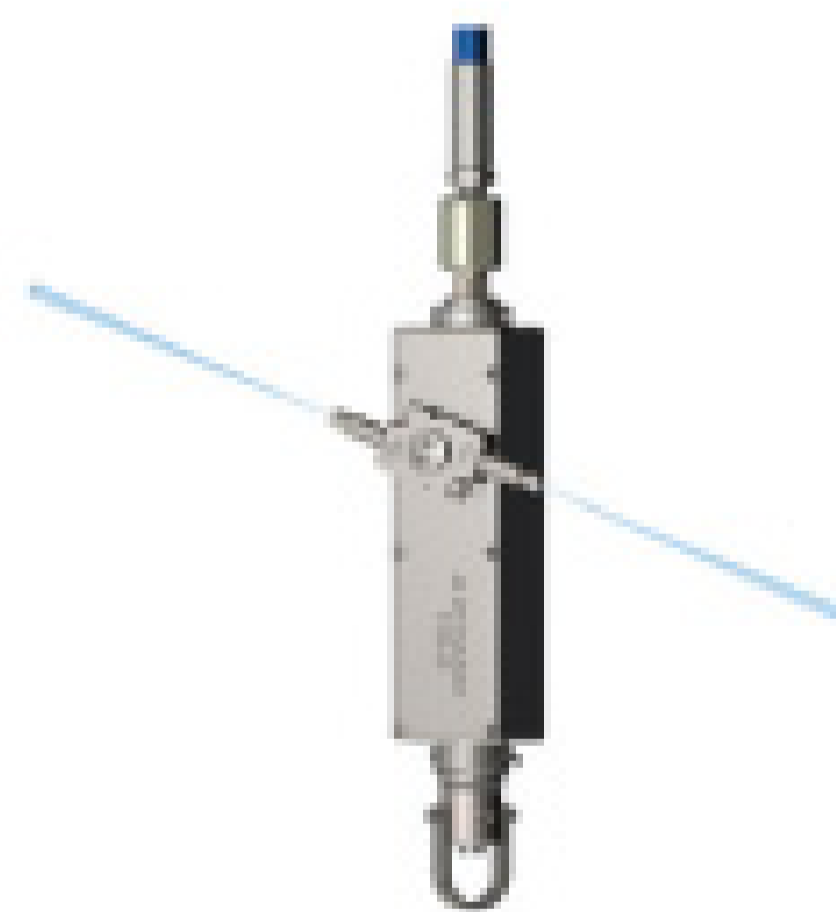
Cretex Specialty Products

Cretex manhole chimney seals are designed to stop frame-chimney inflow caused by frost heave, soil movement, traffic loading, thermal expansion and contraction of the surrounding pavement, and poor or antiquated construction methods. Both the internal and external rubber seals have a minimum 3/16-inch thickness for durability and resistance to puncturing and tearing. The standard 8-inch internal seal is double pleated, while the 10-inch wide seal is triple pleated. The extra wide internal seal has four pleats for a minimum 2-inch vertical and 1/2-inch horizontal movement. The one-piece channeled expansion bands are 1 3/4 inches wide and fabricated from corrosion-resistant, 16-gauge stainless steel. The multiple transverse tab slots in the bands provide for 2 1/2 inches of diameter range. Once expanded, the band can be locked in place. 800/345-3764; www.cretexseals.com; Expo booth 7218.



StoneAge Inc.

The Torus 3-D tank cleaning tool is designed to handle pressures from 5,000 to 20,000 psi and up to 80 gpm by simply changing the manifold and inlet coupling. With few moving parts, it can be easily assembled and maintained in the field. 866/795-1586; www.stoneagetools.com; Expo booth 4133.



Madewell Products Corp.

The Mainstay PortaMortar 7-cubic-foot mixer is a versatile option for the mixing, pumping and spraying of restoration mortars in difficult-to-access locations. The unit attaches to most medium to large skid-steer loaders (1,800-pound minimum capacity) and is powered by the hydraulics on the loader. The ergonomic design puts the top of the mixer at the operator's waist. Hydraulic cylinders lift the entire mixer unit to dump the contents into the pump hopper. Both the mixer and pump are reversible and equipped with variable speed



controls. Options include hydraulically powered, 15-cfm compressor and 5,000-psi airless spray unit. 770/475-8199; www.madewell.com; Expo booths 5013, 6011.

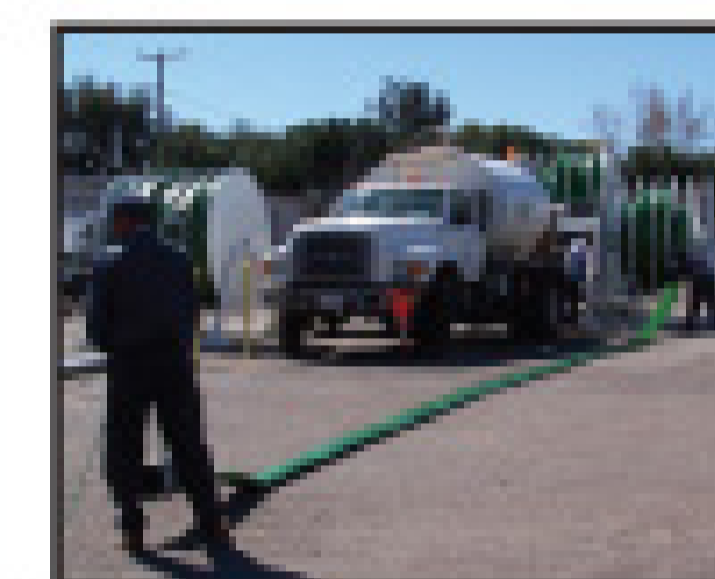
WaterJet Technology Association

The Recommended Practices for Industrial Vacuum Equipment, available on CD-ROM and VHS, is a visual companion for the Recommended Practices for Industrial Vacuum Equipment manual. The safety video includes types of equipment, applications, safe operations, hazards and controls, static electricity, degree of vacuum, vacuum breaker, burns, overhead obstructions, high-voltage electrical hazards, chemical hazards, fires and explosions, job setup, protective gear, inspections, material handling, hoses and fittings, and job completion. 314/241-1445; www.wjta.org; Expo booth 19013.



Hydro Engineering Inc.

Wasteline 600 Green hose is designed for sewer or wastewater spills. Available in 2-inch through 12-inch diameters, the hose has a heavy-duty, polyurethane cover and liner with a heavy-duty denier woven polyester jacket reinforcement for high-pressure applications in extremely abrasive environments. The hose can be transported, deployed, retrieved and stored on the HRA Hose Reel System. 800/833-5812; www.hydro-eng.com; Expo booth 6149.



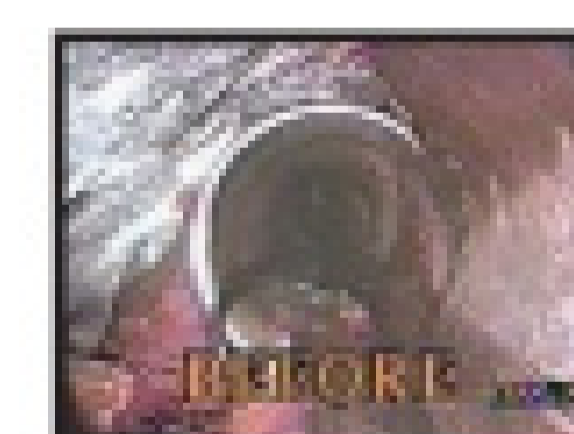
Containment Solutions Inc.

Flowtite water tanks are designed for potable and non-potable water applications, including green building initiatives. The lightweight, underground fiberglass tanks are non-corrosive and range in size from 500 to 50,000 gallons. Tanks can be used for septic, rainwater harvesting, landscape irrigation, graywater reuse, and stormwater collection and treatment. 877/274-8265; www.containmentsolutions.com; Expo booth 3143.



Infrastructure Repair Systems Inc.

The no-dig, ambient-cure system is designed to spot repair any size pipe without interrupting service. The complete kit includes a sewn fiberglass and felt liner, Velcro straps, melt-away strings and pre-measured epoxy. Formulated for summer or winter, the system is ASTM 1216 certified. 877/327-4216; www.irsi.net; Expo booth 25.



www.pumpershow.com

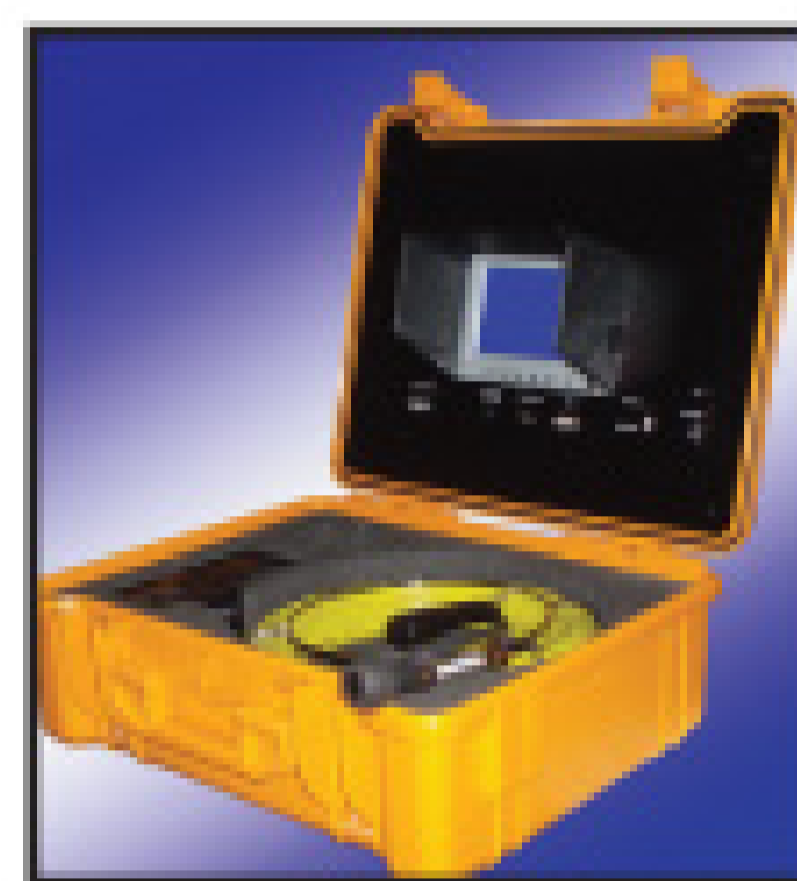
Sealing Systems Inc.

The Infi-Shield external shield is designed to prevent erosion and infiltration in manholes or catch basins. The one-piece molded seal is made from EPDM rubber and has a reinforced, pre-formed, L-shaped corner. The seal is bonded with a non-hardening butyl mastic that will pass a vacuum test and does not require any special tools to install. 800/478-2054; www.ssisealingsystems.com; Expo booth 165.



Forbest Technologies

The SWJ-3188DN portable video inspection camera system includes a 7-inch LCD monitor and waterproof camera with built-in DVR. The system is available with 65-foot, 98-foot and 130-foot fiberglass cables and a 4-hour, rechargeable lithium-ion battery. 408/573-8899; www.forbestcorp.com; Expo booth 6005.



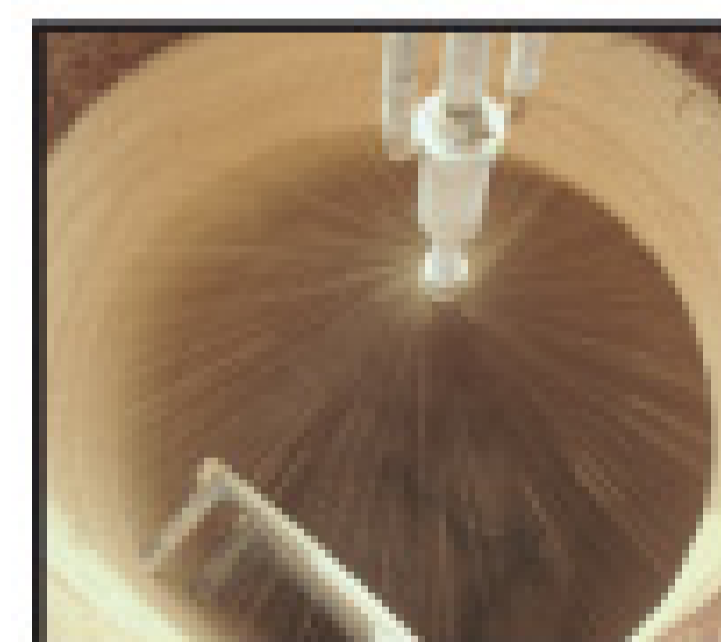
WMI Inc.

The tracked transporter power carrier is designed to provide access to manholes in wetlands, wooded areas and narrow alleys. 800/503-0076; www.wmitsh.com; Expo booth 18.



Sauereisen Inc.

The SewerGard 210 family of protective linings is formulated for low permeability to enhance corrosion resistance and extend the longevity of infrastructure, such as manholes and lift stations. Available in several variations to accommodate desired thickness and methods of application, the liner can be spincasted, troweled, rolled or applied using airless spray. 412/963-0303; www.sauereisen.com; Expo booth 4004.



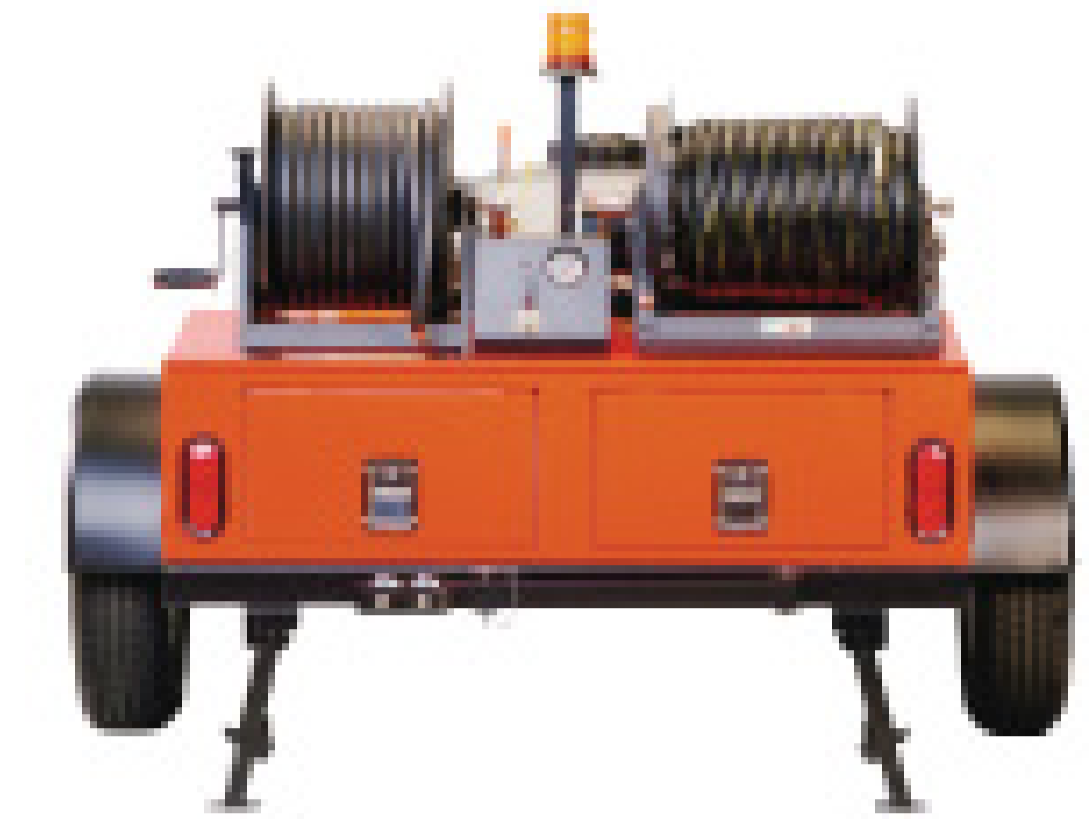
High Pressure Equipment Co.

The new line of NPT valves and fittings are made of high-tensile, 316 stainless steel and are offered in both two-way straight and angle configurations. Sizes include 1/8, 1/4, 3/8, 1/2, 3/4 and 1 inch. Fittings are available as elbows, tees and crosses to accommodate either 10,000 or 15,000 psi. 814/838-2028; www.highpressure.com; Expo booth 6197.



General Pipe Cleaners

The Typhoon trailer jet delivers 12 gpm at 2,500 psi and features a variable-speed controller for easier handling on the 400-foot capacity hose reel. Other features include a 200-gallon holding tank, 24-hp Honda engine, two hose reels mounted at the rear of the unit and lockable toolbox with engine controls mounted inside. Standard equipment includes electric brakes, safety strobe light, rear fold-down stabilizer jacks, retractable hose guide arm, antifreeze system and high-performance nozzle set. 800/245-6200; www.drainbrain.com; Expo booth 3147.



Spartan Tool LLC

The fully enclosed Warrior trailer jetter is designed to exceed all OSHA noise standards. Powered by a Kubota 83-hp Tier IV turbo diesel engine, it exceeds emission requirements through 2012. Available with an optional remote, the unit produces 4,000 psi at 18 gpm. Baffled tanks enable the 300-gallon jetter to be towed to jobsites full of water. 800/435-3866; www.spartantool.com; Expo booth 1170.



Industrial Diversified Products Inc.

The 7-pound T-Lift is engineered to unseat, lift and set down manhole covers measuring 19 to 26 inches from pick hole to pick hole in one smooth motion with no setup, bending, straining or prying. The lift also cleans the inside ring for proper resealing. 251/626-9143; www.tlifts.com; Expo booth 3213.



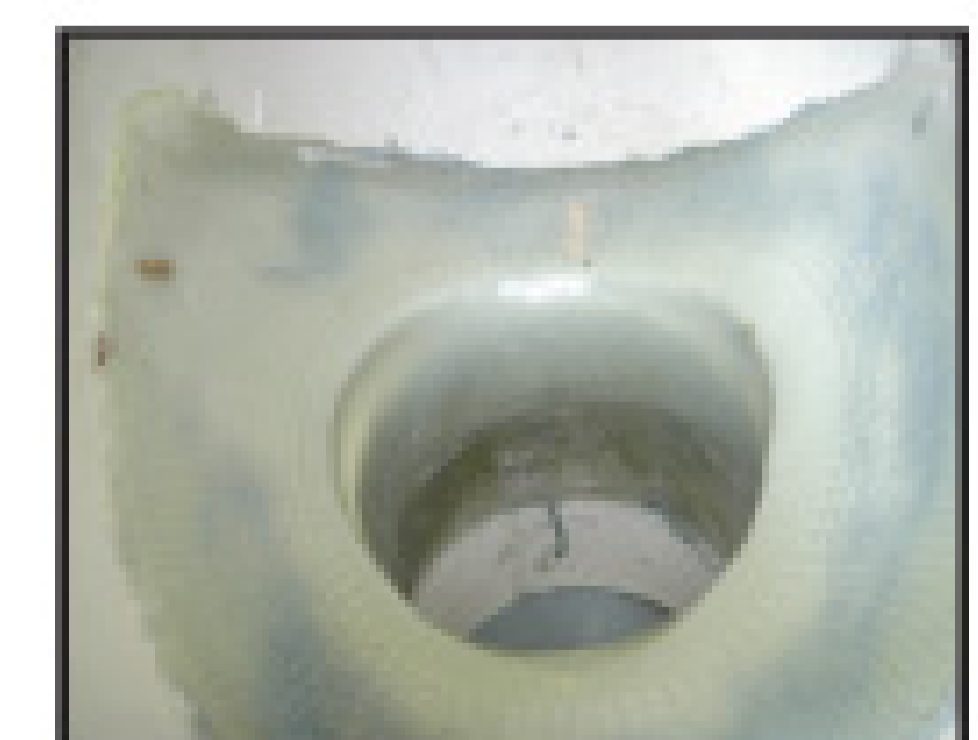
Formadrain Inc.

The inflatable, rubber LMC lateral main connection system is designed to repair tee and wye sewer connections from 4-inches by 4-inches up to 24-inches by 8-inches long. Three access points are required for installation (two manholes and one cleanout, inside or outside the building). 888/337-6764; www.formadrain.com; Expo booths 4020, 4021.



AMerik Engineering

Top Seal lateral sealing features a resin-impregnated fiberglass laminate that is inserted into the lateral opening and cured with ultraviolet light in seven minutes. The Saertex multicom fiberglass liner has a 70-year life expectancy. The AM cutter system is designed to remove protrusions prior to relining and reopens laterals in relined pipes from 6 to 22 inches. The fiber spot repair sectional liner system steam cures in 45 minutes, while the H-Expander re-rounds 8- through 12-inch pipes with up to 25 percent collapse. 770/924-2899; www.amerikengineering.com; Expo booth 3033.



www.pumpershow.com

EXPO PRODUCT PREVIEW

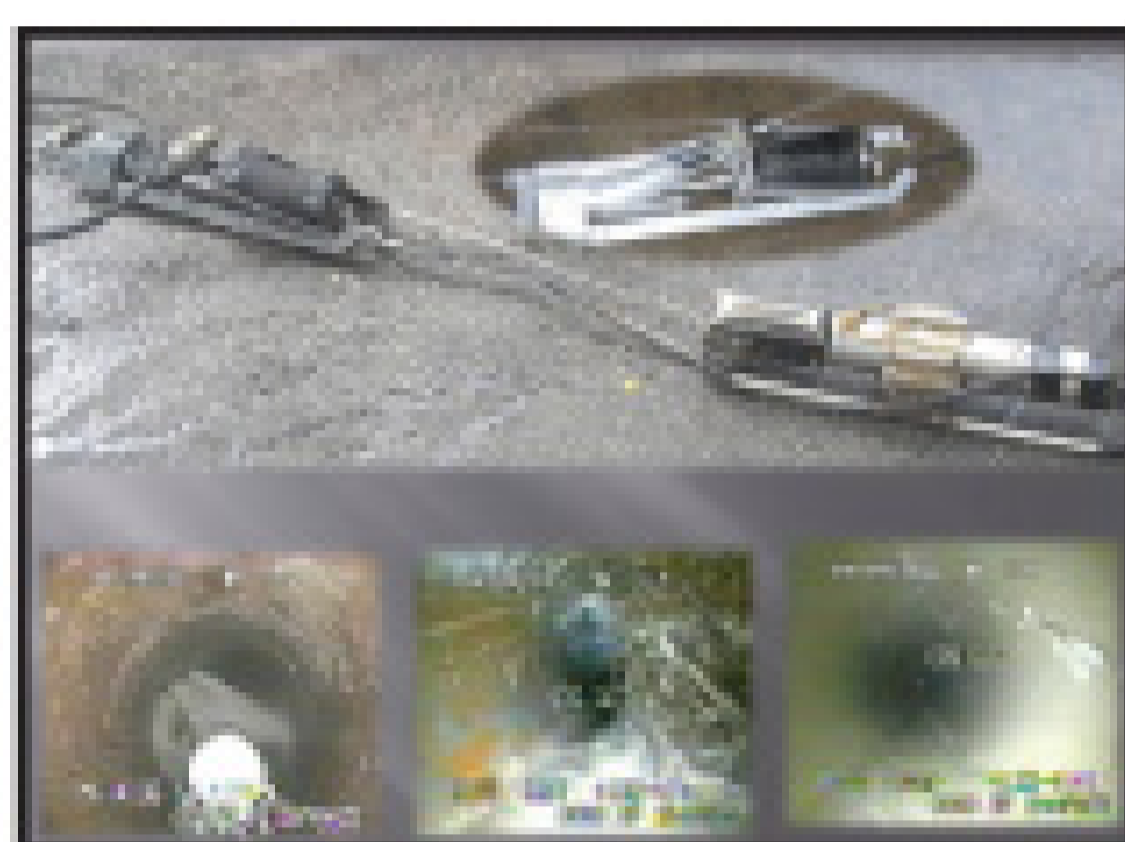
AP/M Permaform

Permaform manhole rehabilitation system is a fully structural repair that can be done without excavation. Its Permacast solution is a centrifugally applied cementitious liner. The synthetic mortar is cast from a robotic applicator in the center of the manhole. A dense, uniform layer is compacted in place at any thickness from 1/4 to 2 inches, depending on the degree of deterioration and the depth of the manhole. 800/662-6465; www.permaform.net; Expo booth 32.



Logiball Inc.

The lateral launcher is designed to guide a 1/2-inch hose and nozzle into the lateral connection from the main line sewer. Winched in tandem with the CCTV camera, the 0-90 vdc motor is used to rotate the guiding arm and nozzle into the lateral connection. With the pump turned on, the back jets propel the hose into the lateral for cleaning and cutting tools. 800/246-5988; www.logiball.com; Expo booth 7114.



Aries Industries

The Pathfinder inspection system is designed for use in 6- to 24-inch diameter pipelines. Featuring a high-resolution zoom camera and high-density LED lighting system, the tractor incorporates low-maintenance brushless motors and electronic clutches for long-lasting power. The system is available in both portable and truck-mounted configurations. 800/234-7205; www.ariesindustries.com; Expo booth 1008.



Perma-Liner Industries Inc.

The InnerSeal Connection System is designed for connecting service laterals to the main, utilizing the same CIPP technology as lateral lining and point repairs. The system works with all tee and wye connections from 6 by 4 inches to 36 by 12 inches. Lateral lengths are available from 18 inches to more than 50 feet. All materials meet ASTM F-1216-07a requirements. 866/336-2568; www.perma-liner.com; Expo booth 1186.



Hy-Flex Corp.

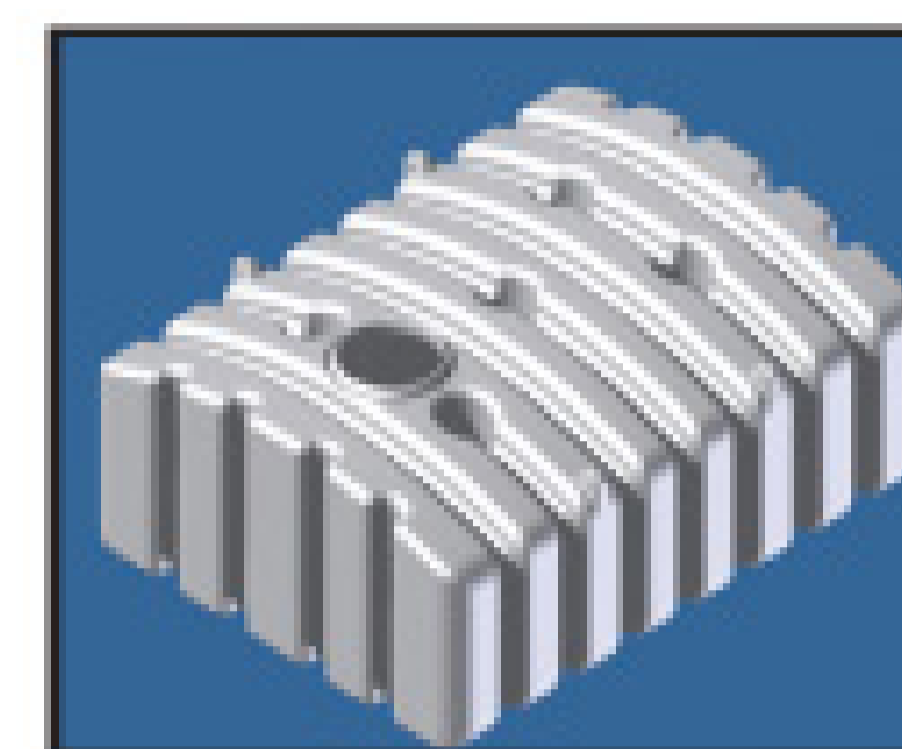
The HZ-30DM pump is designed for manhole restoration and features a 2L6 progressive cavity pump with a variable speed output of up to 10 gpm for cover-



age of up to 1,000 square feet per hour at 1/2-inch thick. The self-contained unit is powered by a Yanmar diesel engine. Other features include an onboard 12 cfm compressor and 4.5-cubic-foot mixer. 866/849-6246; www.hyflexcorp.com; Expo booth 18007.

Norwesco Inc.

The 2,000-gallon holding tank can be used as a one compartment septic tank, holding tank, pump chamber or cistern for potable water. Native soils can be used for backfill and no water is necessary during installation. The end ribs will accept up to 4-inch fittings. 800/328-3420; www.norwesco.com; Expo booth 12035.



Gamajet Cleaning Systems The E-Z8 rotary pressure washer is designed to clean wetwells, lift stations and manholes without the need for confined entry. Lighter, shorter and narrower than similar cleaning systems, the E-Z8 delivers up to 1,000 psi and a flow rate of 130 gpm. A choice of nozzles and stators are available. 877/426-2538; Expo booth 8155.



Aqua Mole Technologies Inc.

The Sewer Squad premium nozzle kit includes a penetrating thruster, flusher, degreaser/de-icer, the sand and gravel clearing Monster and a rotor jet nozzle. All nozzles are custom drilled to match the flow specs of the jetter and packaged in a durable storage box. 877/457-2782; www.aquamole.com; Expo booth 4170.



MyTana Manufacturing Company Inc.

The DCB 10 inspection system features a 12.1-inch touchscreen with full text writing capabilities, digital recording and various media output. The system offers 11 onscreen touch-and-drag icons for locating and identifying problem areas in pipes. 800/328-8170; www.mytana.com; Expo booth 8089.



PipeHunter Inc.

The Jet Eye combo retrofit cleaning system is designed to clean and TV without the need for extra cables. Operators can set up and drop the jet camera into the line like a regular jetter and see exactly what is in the line. All recorded video is put directly onto a thumb drive for easy review. 800/373-1318; www.pipehunter.com; Expo booth 3218.



Allan J. Coleman Co.

The Gvision 2000 universal camera monitor weighs less than seven pounds and mounts on or off the camera reel. Features include an ultra-bright 10.4-inch LCD screen designed for viewing in direct sunlight and a 30GB removable digital video recorder. 773/728-2400; www.allanjcoleman.com; Expo booth 182.

SuperVac 2000

The 6,400-cfm Hydrovac is designed for the highest efficiency. All components are housed in a full aluminum, acoustical enclosure that is fully accessible from both sides. All equipment is heated and insulated with programmable diesel heaters. Standard features include 3,000 USG debris tank, 1,200 USG water tank, 25-foot boom with 320-inch arc, 800-Btu diesel boiler, adjustable water pump pressure and pendant control panel with wireless remote. 418/839-5702; www.supervac2000.com; Expo booth 7031.



cracking from ground transition, traffic vibration or frost. A sprayed-in liner covers the interior of the manhole from the floor to the top, including the casting, helping reduce sediment and sand infiltration and sewer sediment buildup. 952/873-3292; www.midwesttrenchless.com; Expo booth 17055.

Rausch Electronics USA

The steerable L135 single-tractor platform with optional electric camera lift performs in 6-inch to 48-inch diameter pipelines as a mainline and lateral launcher, mainline laser profiler or a lateral flushing system. 717/709-1005; www.rauschtv.com; Expo booth 2031.



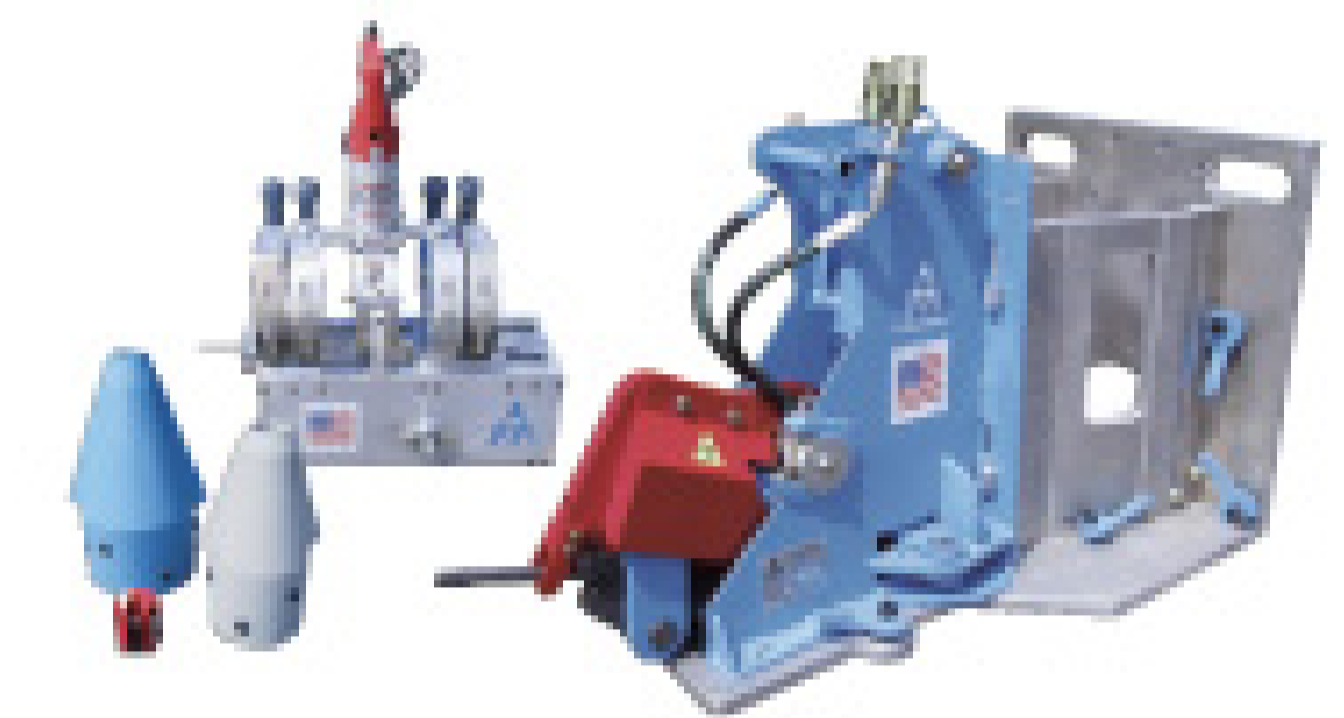
Ratech Electronics Ltd.

The Elite-SD pipeline inspection system is designed around a digital memory card recorder that is accessible from the front of the unit. Video is recorded in MPEG format with up to 240 minutes of recording time. The JPEG picture feature enables users to print and e-mail images. The control unit folds into a compact and lightweight case, weighing 10 pounds. The system also features a 10.4-inch, high-resolution LCD screen and onscreen distance, date, time and user-typed comments. 800/461-9200; www.ratech-electronics.com; Expo booth 144.



TT Technologies Inc.

The trenchless Grundotugger static pipe bursting system replaces service laterals up to 150 feet. Able to negotiate turns and bends up to 45 degrees and overcome tight working conditions, the lightweight system includes everything needed for bursting 4- to 6-inch laterals, upsize or size-for-size, including quick-lock and bolt-on bursting heads, winch cable unit and power pack, and pipe fusion equipment. 630/851-8200; www.tttechnologies.com; Expo booth 8197.



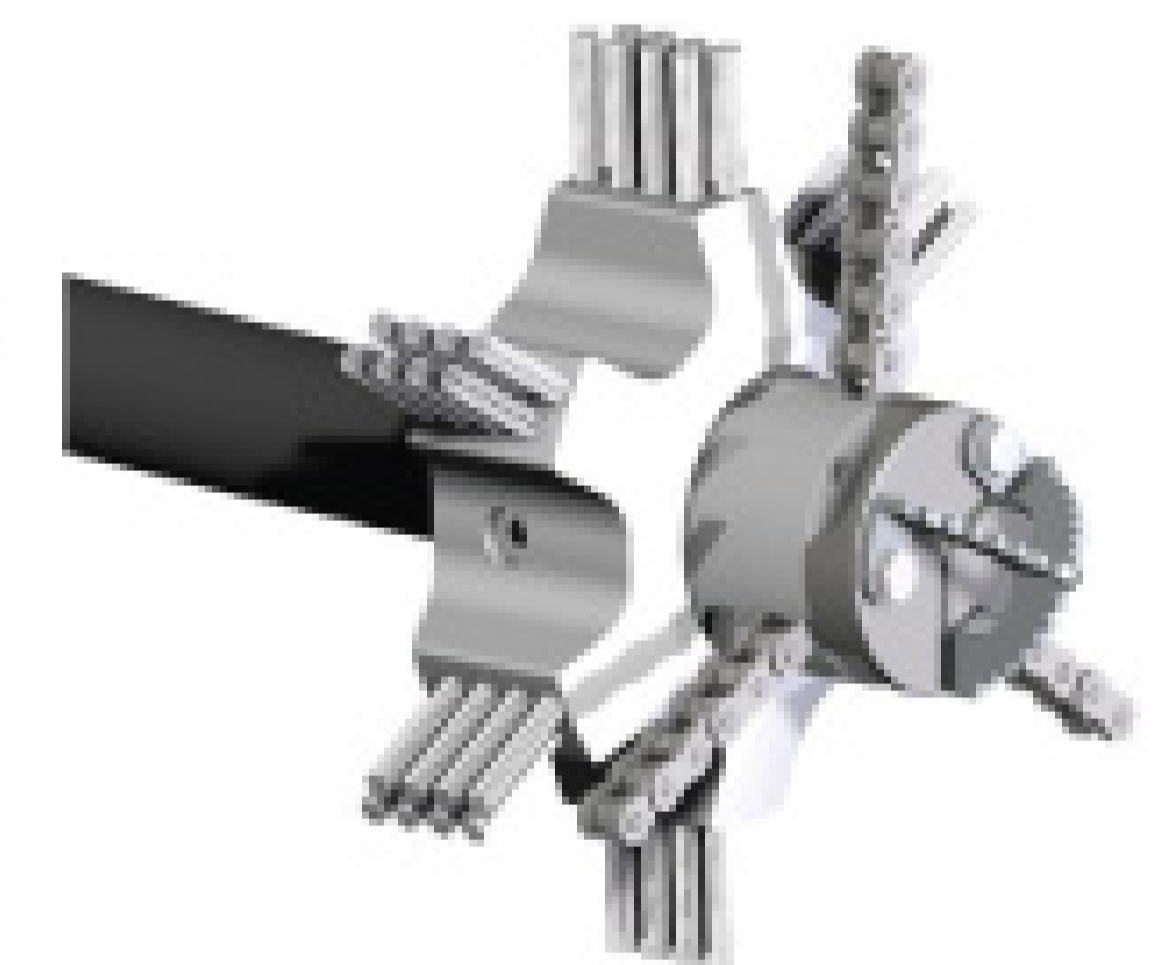
Real-Tite Plugs Inc.

Designed for new and existing construction, Real-Tite Plugs are durable, reusable and code-approved for a permanent or temporary seal regardless of the condition of the threads. In and out in seconds, the plugs are available in 1.5 inches to 4 inches. 800/877-0610; www.real-titeplugs.com; Expo booth 3193.



ENZ USA Inc.

The turbine-driven root cutter nozzle can be used with both clean and recycled water in pipes ranging from 4 to 8 inches in diameter. Designed for the removal of roots, hard grease deposits and other debris in clay pipes, the nozzle requires a minimum of 50 gpm and 1,700 psi with a 3/4- or 1-inch hose connection. An optional head for more aggressive cleaning in concrete and steel pipes is available. 630/692-7880; www.enzusainc.com; Expo booth 67.



CUES Inc.

The ECO CCTV pipeline inspection vehicle from CUES and the EIV all-electric vehicle are designed to reduce pollution and energy costs. The truck-mounted ECO can run on battery or engine power, has zero generator emissions and can be set to inspect 6- to 200-inch mainlines. The EIV can travel a minimum of 40 miles roundtrip to accomplish eight hours of CCTV inspection/condition assessment with one charge. 800/327-7791; www.cuesinc.com; Expo booth 1068.



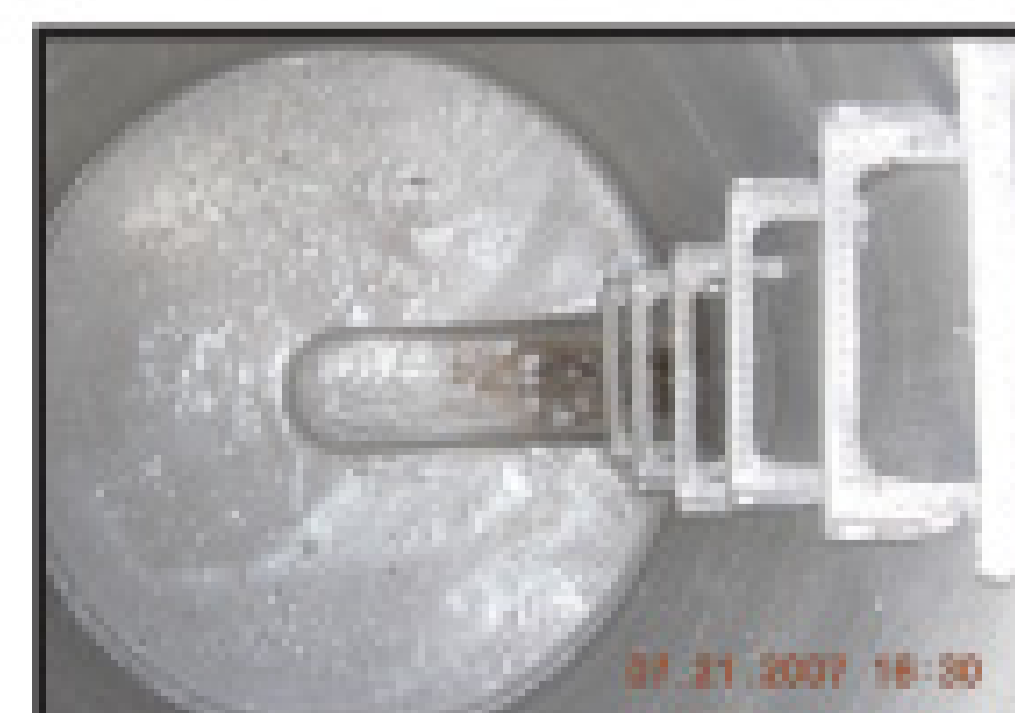
International Union of Painters and Allied Trades

District Council 53 provides year-round training for workers in the hydro and vac industry in all aspects of the work skills needed to get a job done in a safe and proficient manner. The council also provides additional training for its signatory employers in Ohio, Pennsylvania, Maryland, Virginia, Kentucky and West Virginia so they can curtail the costs associated with training. 304/343-8250; www.paintersuniondistrict53.org; Expo booth 13029.



Midwest Trenchless Technologies Inc.

Polyurea manhole lining system is designed to offer structural support, stop infiltration and root intrusion, and be resistant to gases and chemicals. Unlike cement, fiberglass or most epoxy liners, Polyurea offers 356 percent elongation to resist



www.pumpershow.com

EXPO PRODUCT PREVIEW

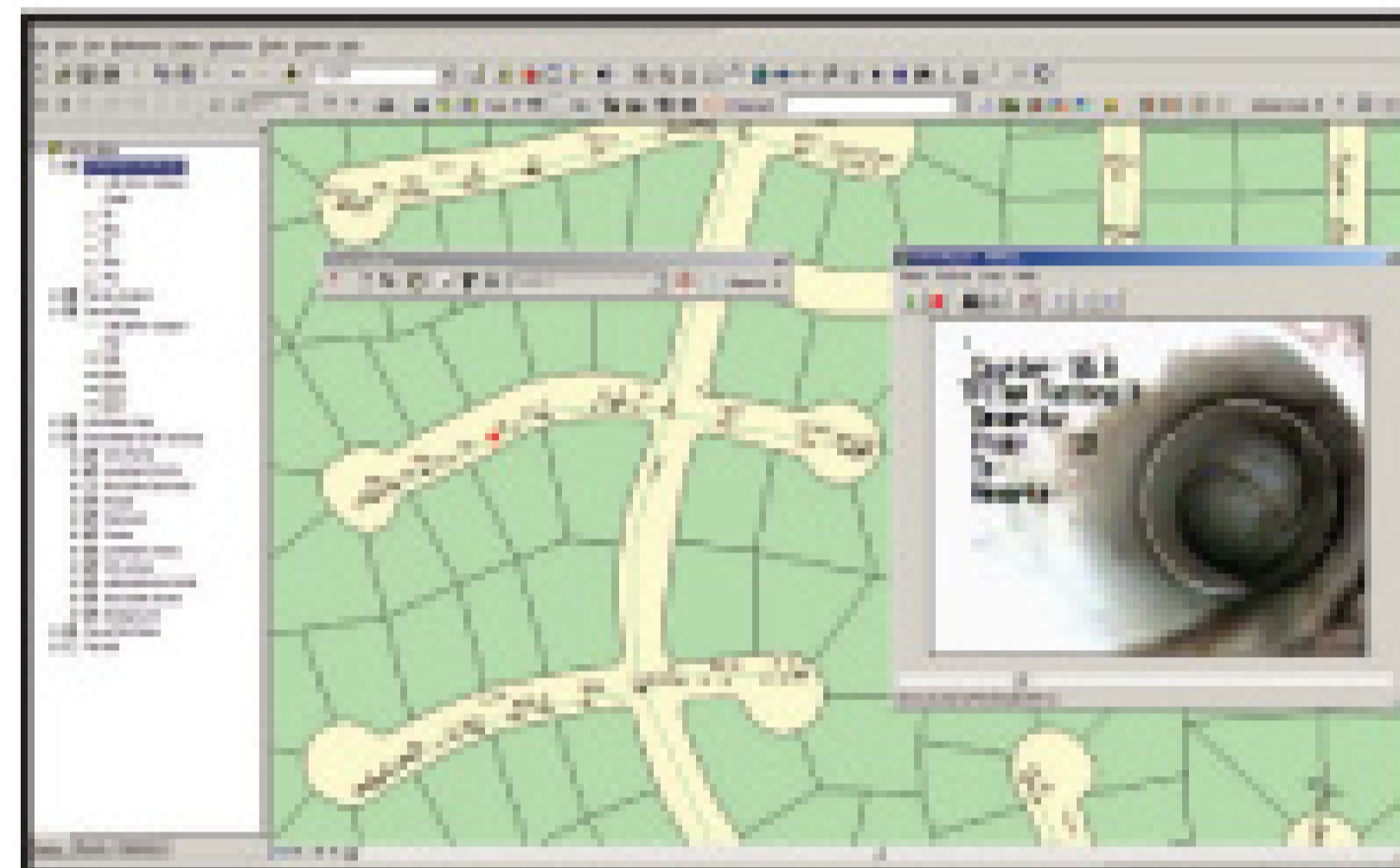
Envirosight LLC

The SuperVision SAT pan-and-tilt lateral launch system crawls 300 feet down mainlines 6 inches and larger and can insert its camera 100 feet into laterals as small as 3.5 inches. The auto-leveling color camera with shadowless LED illumination pans and tilts to capture sidewall detail. An integral sonde transmitter (available in standard frequencies) makes locating from above quick and easy. The system also is equipped with a rearview camera, auxiliary lamps and steerable, 6-wheel drive for maneuvering troublesome launch points. The SAT reel crawler and auxiliary reel are compatible with SuperVision reels and controls. **973/252-6700; www.envirosight.com; Expo booth 1130.**



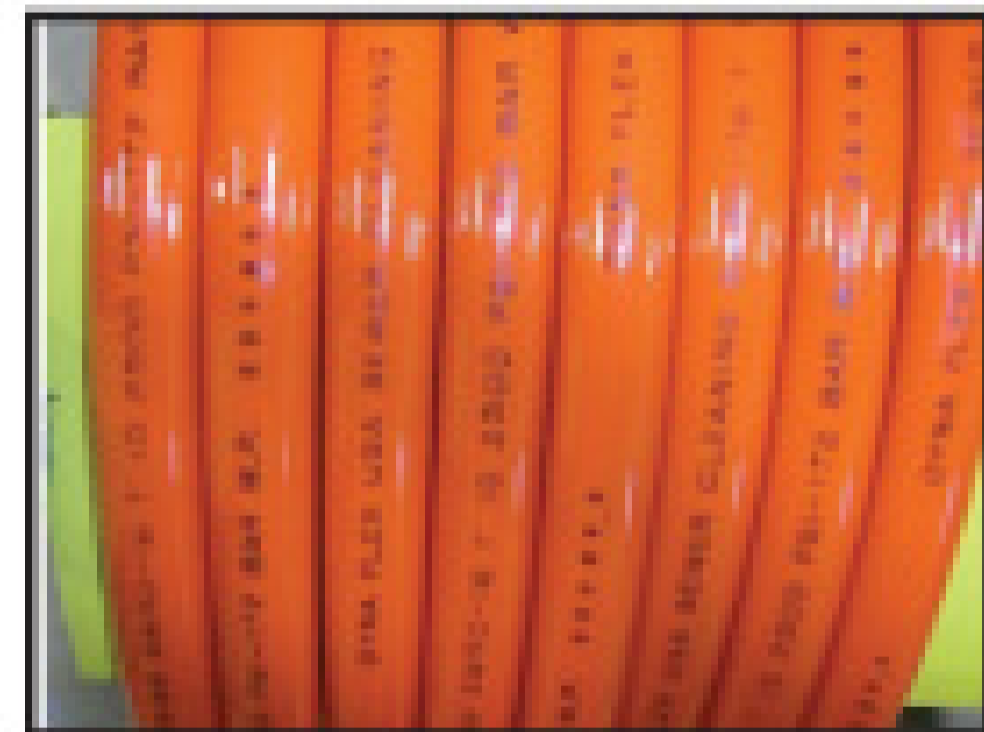
PipeLogix Inc.

The flexidata GIS module displays footage and pipe condition as well as filter survey data, and highlights pipes with problems in ArcMap. By selecting the condition, the linked movie moves to the condition for viewing. The condition export can be done to a feature class in a geodatabase or shape file. **866/299-3150; www.flexi-data.com; Expo booth 158.**



Dyna-Flex Inc.

The orange, 1-inch I.D. thermoplastic sewer cleaning hose has a maximum operating pressure of 2,500 psi and a minimum burst pressure of 6,250 psi. The hose is available in standard lengths of 300, 400, 500 and 600 feet. Non-standard lengths are available. The SWRO-16 series is designed for flexibility and abrasion resistance. **440/946-9424; www.dynaflexinc.com; Expo booth 7004.**



Prototek

The 5/16-inch diameter polymer-coated fiberglass push rod has integral conductors that radiate a signal over the entire length for line tracing, and a sonde at the leading end for pinpointing the exact position of the end of the rod. The rod can be excited at 8kHz, 16kHz or 64kHz in two power ranges. The sonde sends out a 512-Hz signal so that the two signals can be distinguished. The system includes 300 feet of rod on a 26-inch reel with wheels. **800/541-9123; www.prototek.net; Expo booth 3187.**



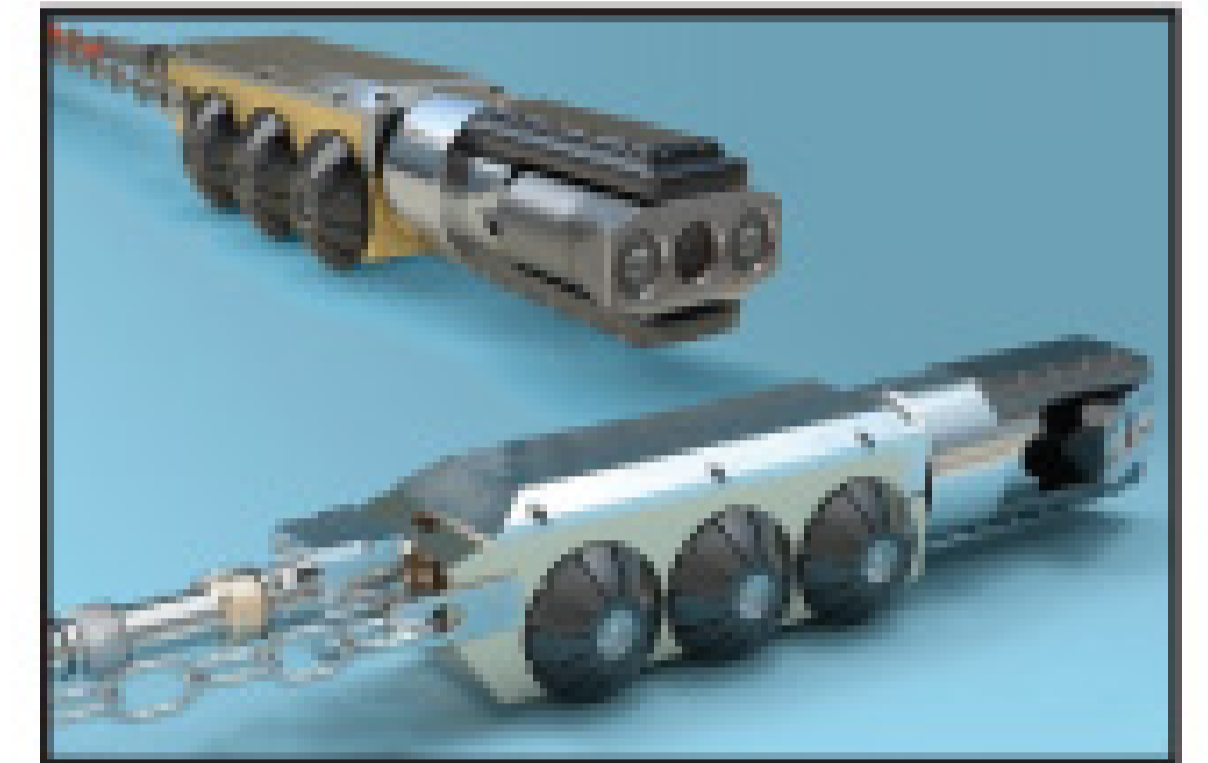
Reed Manufacturing Co.

The Feed Tapper drills through PVC, PE, cast iron, ductile iron and steel pipe wall while under pressure using a corporation stop inserted into a service saddle. Designed for plumbers and municipal water departments, the compact tool features a separate, manual feed control for regulating shell cutter pressure. **814/452-3691; www.reedmfgco.com; Expo booth 60.**



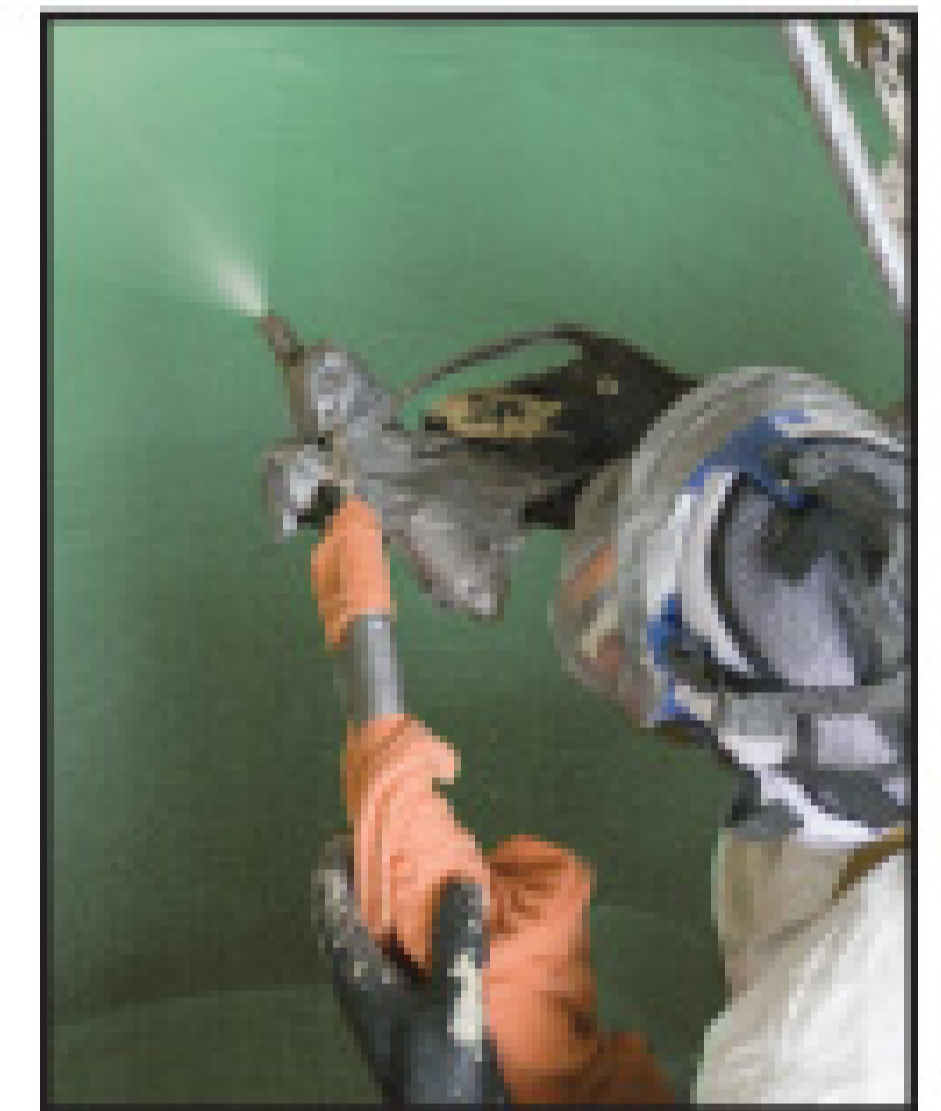
Cobra Technologies

The 6-inch wheeled crawler is designed for 6- to 24-inch pipelines, including relined 6-inch pipe. The system features a version 9.0 pan-tilt-zoom camera and includes wheels for pipes up to 24 inches in diameter. Options include a continuous 360-degree rotate function and remote camera elevator. **800/443-3761; www.cobratec.com; Expo booth 7057A.**



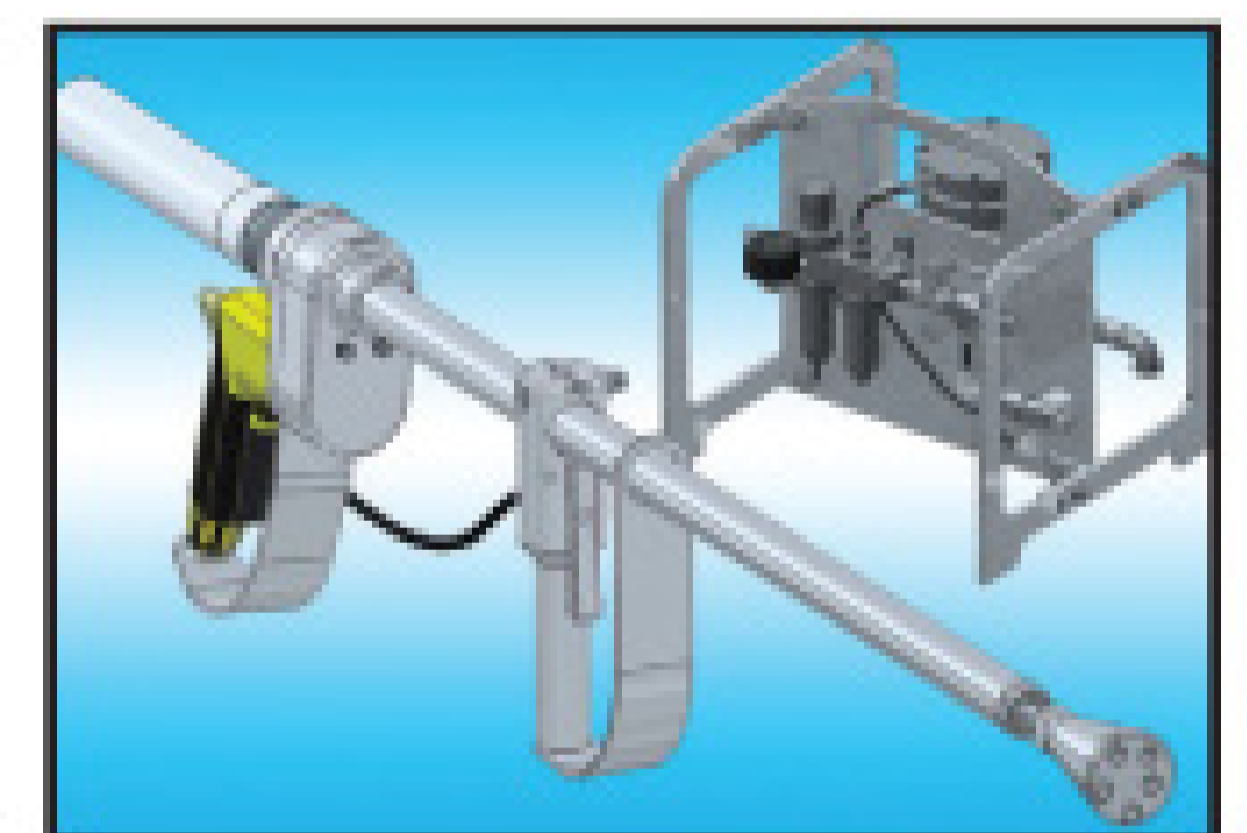
Sprayroq Inc.

Sprayshield Green spray-applied polyurethane coating provides chemical resistance for concrete, steel, masonry, fiberglass and other surfaces. This flexible, 100 percent solids coating utilizes an environmentally friendly, renewable source material that replaces 35 percent of its petroleum-based components. The coating's quick curing times also enables the newly protected structure to be immediately returned to service. **800/634-0504; www.sprayroq.com; Expo booth 6035.**



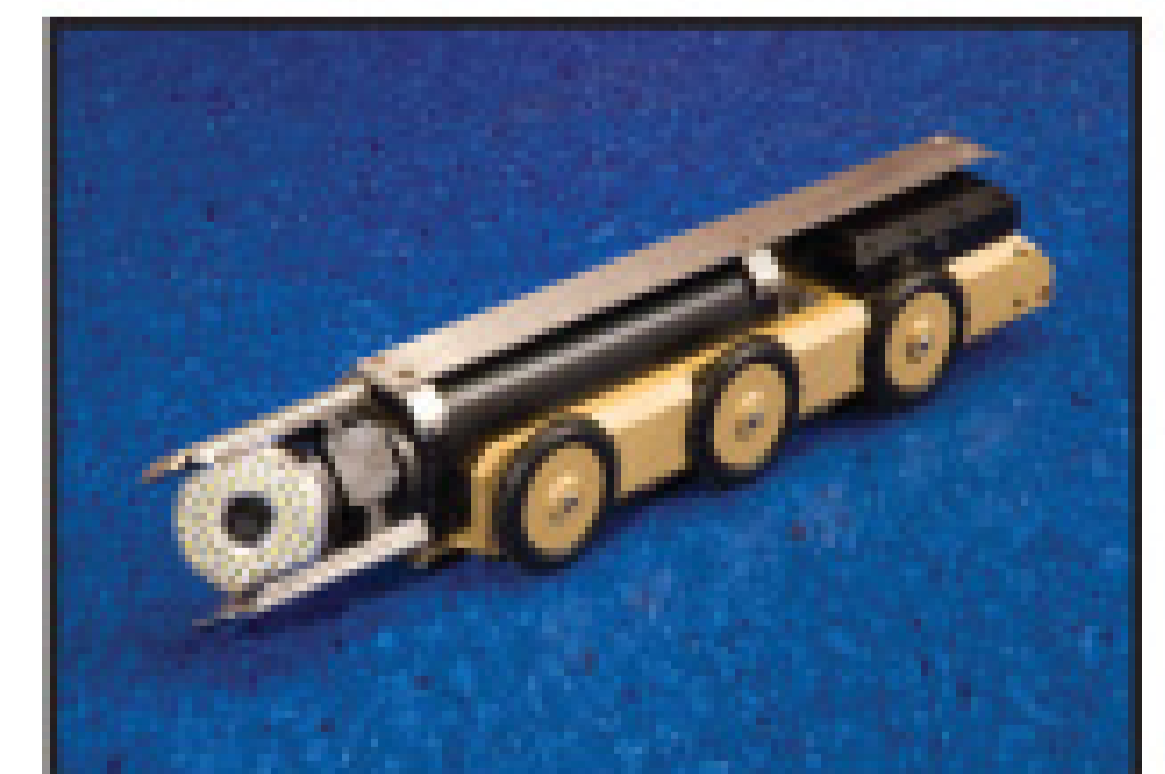
Advanced Pressure Systems

The Cobra ultra-high-pressure jetting system is designed for surface preparation. The rotary gun and valve combination is engineered for easy use and easy servicing, combining a range of existing products into one package. **877/290-4277; www.advancedpressuresystems.com; Expo booth 3023.**



RS Technical Services Inc.

The TranStar steerable tractor video pipeline inspection system features two, 90-watt rare earth permanent magnet motors. Designed to work with the Omni III, NovaStar and TrakStar cameras, it can inspect sanitary or storm line from 6 to 30 inches in diameter and up to 3,000 feet in length. The transporter has three forward speeds, reverse and freewheel. It can turn on its own axis and travel up to 60 feet per minute. Options include rearview camera, manual elevator system and multiple tire options. **800/767-1974; www.rstechserv.com; Expo booth 4069.**



The Strong Co.

Strong-Seal sealant is a 100-percent solids, zero-VOC polyurea material formulated to prevent infiltration between the manhole cover frame and manhole chimney. The cartridge-loaded spray application system requires no primer, no material mixing and no wasted materials. It also allows for faster and more economical installation. The sealant is chemical-resistant and has a temperature service range of -20 to 250 F and an application temperature range of -20 to 120 F. It remains flexible to withstand traffic and freeze-thaw cycles. 800/982-8009; www.strongseal.com; Expo booth 9229.



BASE Engineering Inc.

The Ranger series of radio remote controls include CAN bus J1939 serial combination. Systems can be interfaced with multiplex controls for improved safety and productivity with hose ends, boom end and jetter radio operation. The radios are available with proportional signal for variable hydraulic speed and range up to 1,000 feet. 800/924-1010; www.baseeng.com; Expo booth 4030.



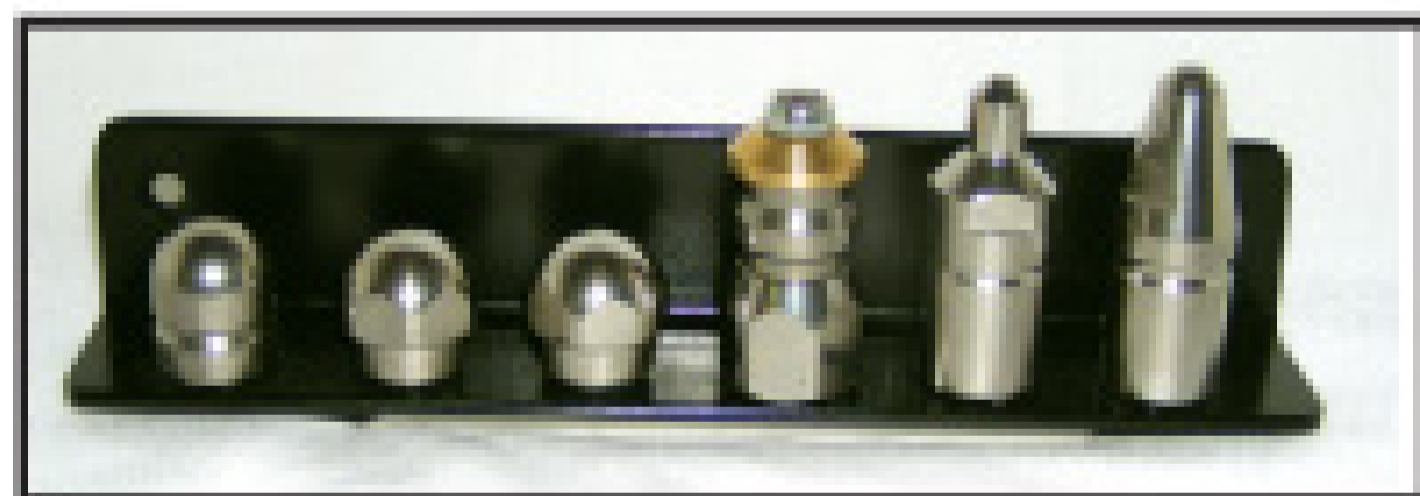
Avanti International

AV-200 Dura-Set is a versatile, two-component liquid polyurethane elastomer grout that can be sprayed, injected or troweled onto a surface. It combines strength and elongation with chemical resistance to create a flexible rubber that is unaffected by water or ultraviolet rays. 800/877-2570; www.avantigrout.com; Expo booth 7136.



Arthur Products Co.

Built to withstand the rigors of the jetting industry, the six-position AquaNoz nozzle rack can be attached to truck, trailer, skid or cart with two screws. 800/322-0510; www.arthurproducts.com; Expo booth 9109.



Cyclops Electronics Inc.

The Value-Pac V portable pipeline inspection system includes 500 feet of cable, color pan-and-tilt camera, audio voiceover, and powered cable rewind and features Pipeline Inspection Data System software. 830/249-9756; www.cyclopsiv.com; Expo booth 4196.



Doug Meadows Company LLC

The Jake manhole cover extractor features an 8-pound, cast-iron head designed to easily break free frozen covers. The extractor has a strengthened serrated edge that's engineered to open virtually any manhole. 800/588-3684; www.dougmeadows.com; Expo booth 161.



Goldak Inc.

The Triad 2310 sewer sonde and camera locator features the peak+ mode target locator, enabling users to find lines at greater depths. 818/240-2666; www.goldak.com; Expo booth 9223.



PipeTech Software

PipeTech Software MACP manhole reporting module enables users to conduct field inspections using NASSCO's latest coding standard, as well as the ability to link GIS and GPS inspection data, reports and video. 800/262-7817; www.pent.com; Expo booth 56.



Max-Life Manufacturing Corp.

The Mighty Max fabricated sewer rodder has 2,000 feet of continuous wire with the power to pull 11,000 pounds. The 75-inch diameter continuous wire reel offers less compression, extending the life of the wire. Other features include electronically driven meters accurate to 0.1 percent, six custom-made, heavy-duty spring compression drive gears (three upper and three lower), and an advanced hydraulic system. Speeds are controlled electronically. A joystick controls the rotational in and out speed. 888/873-6295; www.flexmax.com; Expo booths 14026, 14027.



Vaporooter

Designed for residential root control in laterals, the lightweight unit with flexible hose features a foaming nozzle that seals the line to prevent backflow of foam or odor. 800/223-3684; www.douglasproducts.com; Expo booth 4126.



Vivax Corp.

The vLoc Pro pipe and cable sewer inspection system features DSP technology and a bright 7-inch LCD display, rechargeable batteries and MP4 recorder to store survey data. 866/332-1688; www.vivax.biz; Expo booth 4032.



EXPO PRODUCT PREVIEW

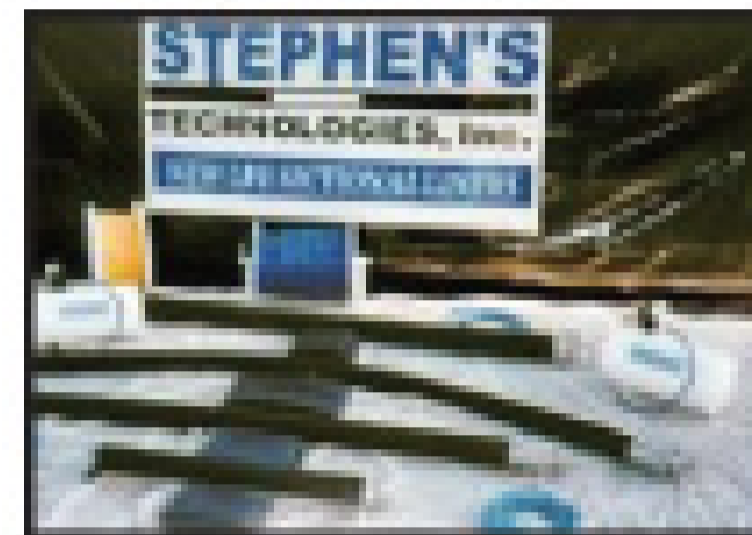
Reline America Inc.

Blue-Tek cured-in-place pipe lining system includes spirally-wound, fiberglass-reinforced, ultraviolet-cured liner and the Quality Tracker System that documents every foot of the curing process. It has a 50- to 80-year service life, based on accelerated testing protocol. 866/998-0808; www.relineamerica.com; Expo booth 13003.



Stephen's Technologies Inc.

The CIP Point Repair system can be customized to fit specific job needs. 888/783-7436; www.stephenstech.com; Expo booth 8073.



Sto-Away Power Cranes Inc.

The SR ST bumper crane with FeatherLite kit option gives the crane a soft glide down to the bumper. The crane replaces a standard pickup truck bumper and lifts up to 2,000 pounds. 800/622-9797; www.stoaway.com; Expo booth 3041.



Simple Solutions LLC

The Wolverine PCB 100-A vapor phase adsorber system is designed to provide odor control for air flows up to 100 cfm. Built of corrosion-resistant materials, applications include odor control of water process tank vents, lift stations and trailer park septic systems. The unit draws odorous air from the source area, treats it to remove offending odors (hydrogen sulfide, mercaptans, ammonia) and releases scrubbed, odor-free air to the atmosphere. It can be used with convection air flow or forced-draft ventilation. 866/667-8465; www.industrialodorcontrol.com; Expo booth 49.



GapVax Inc.

The WetVac industrial vacuum loader has a 4,200-gallon body made of ASTM A 572 material that is blasted, primed and painted with PPG fleet urethane paint and heresite epoxy phenolic coating inside. The vacuum loader contains full-length rubber isolator longshills, primary and secondary shutoffs, galvanized or optional stainless steel tube trays. Optional vacuum kits and catwalk are available. 888/442-7829; www.gapvax.com; Expo booth 1022.



Louisville '09
YOUR PLACE. YOUR TIME.

www.pumpershow.com

TOOLS FOR EVERY MANHOLE PROBLEM



If Speed, Versatility, Safety, Quality and Costs are important to you, call us for *the 'hole solution!*

What's in your tool box?



Booth 32



www.permaform.net

AP/M PERMAFORM

800-6626465

334

AMERICAN HIGHWAY PRODUCTS LTD.

RAISING AMERICA, ONE INCH AT A TIME

69

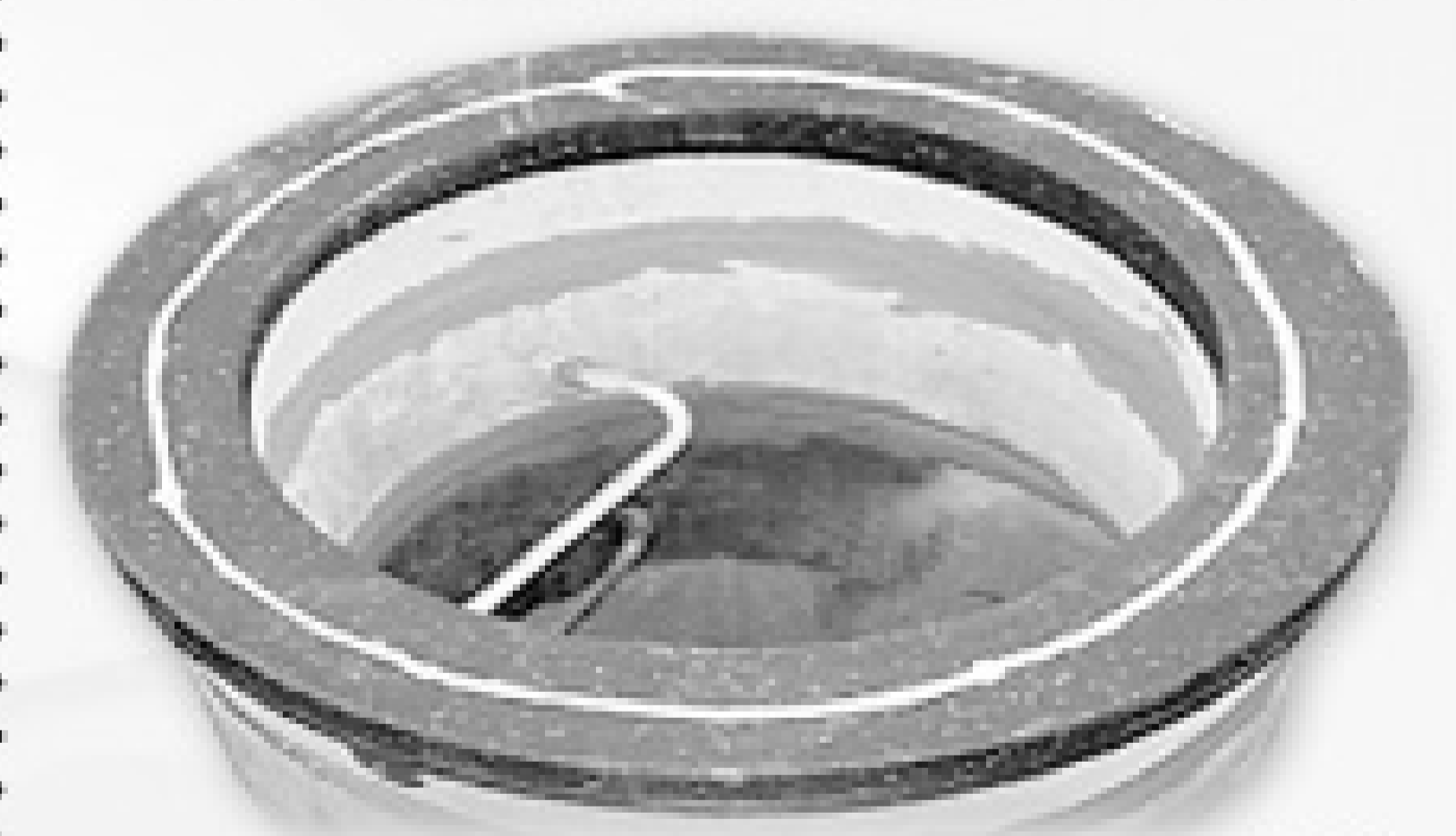
Home of the **PIVOTED TURNBUCKLE** Manhole Riser

The Most Efficient and Powerful Expanding Riser on the Market.



Riser Heights 3/4" and up in All diameters. 1" diametric variance and DOT approved in most states.

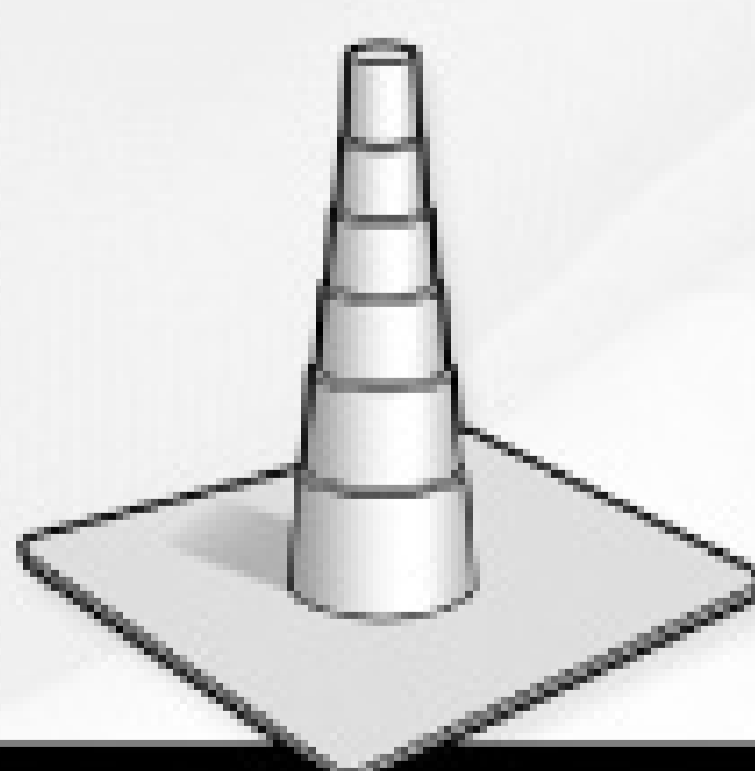
RUBBER ADJUSTING RING



Catch Basin and Valve Box Risers



I.D. Utility Locator



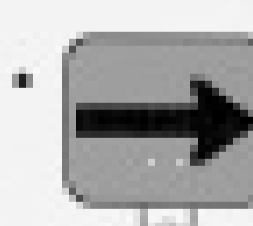
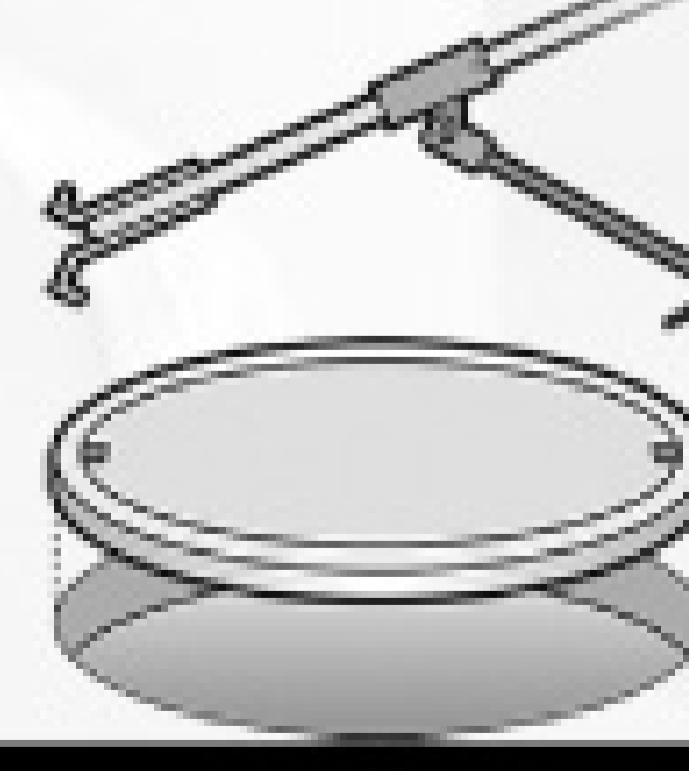
Sewer Lid Seal Kit



Manhole Safety Ring



E-Z Lift



Traffic Control Products



Toll Free 1-888-272-2397

www.ahp1.com

e-mail: sales@ahp1.com

Free Video/CD ROM

P350 flexitrac™ system

Flexibility and reliability in a truly portable system

Pearpoint brings the most advanced and modular portable crawler system to the pipeline inspection professional



Outstanding picture quality

- High-resolution cameras with ultra-bright, white LEDs
- Powerful digital video platform

Reliability where you need it

- Weatherproof construction that's designed to withstand the toughest conditions

Flexible digital data transfer

- Compact Flash cards up to 8GB
- USB 2.0
- Bluetooth® wireless technology

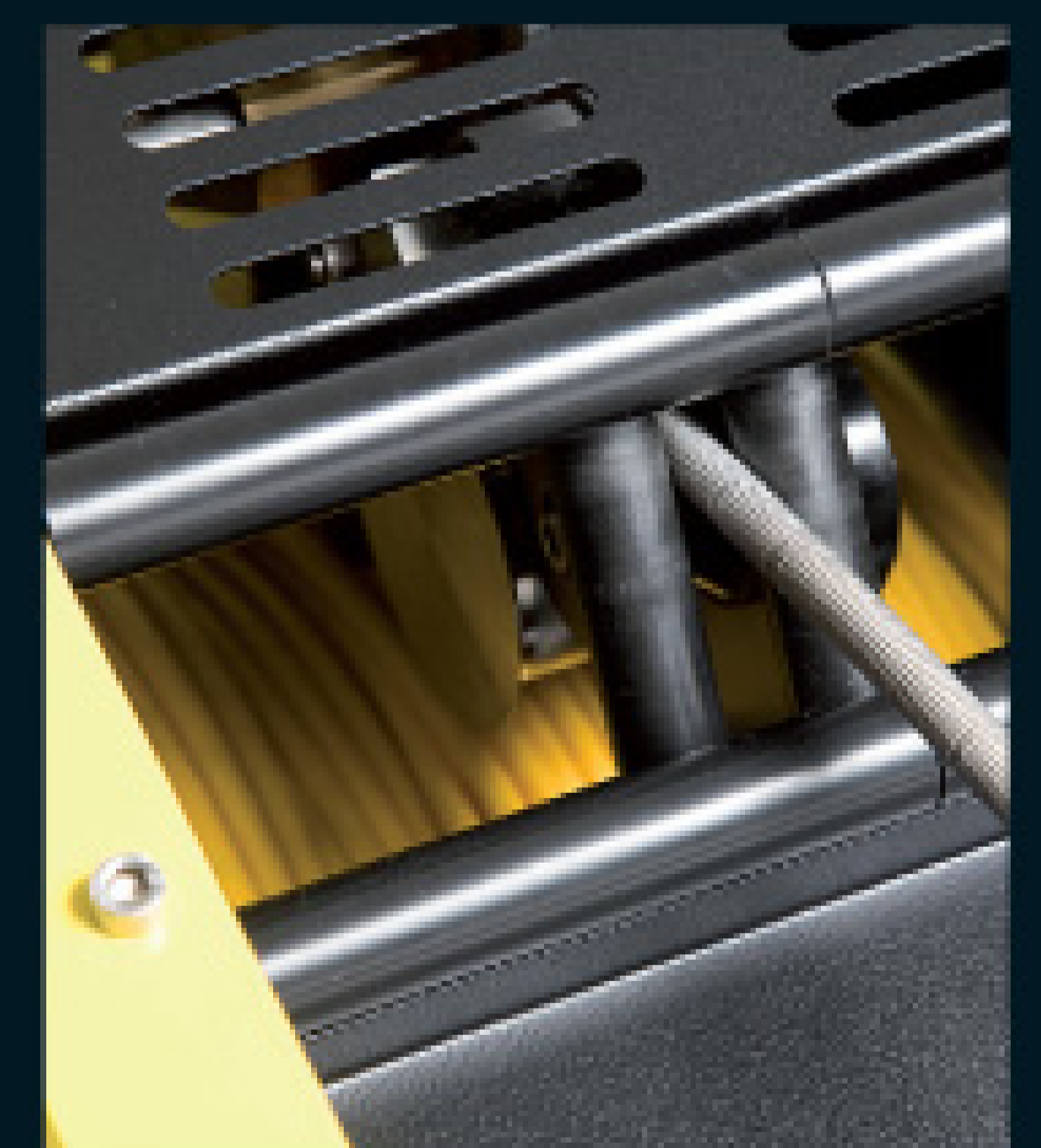
Versatility

- Build the ultimate, compact system to suit your inspection needs

Serviceability

- Designed for continuous operation and easy maintenance on and off site

Pipeline Inspection Technology

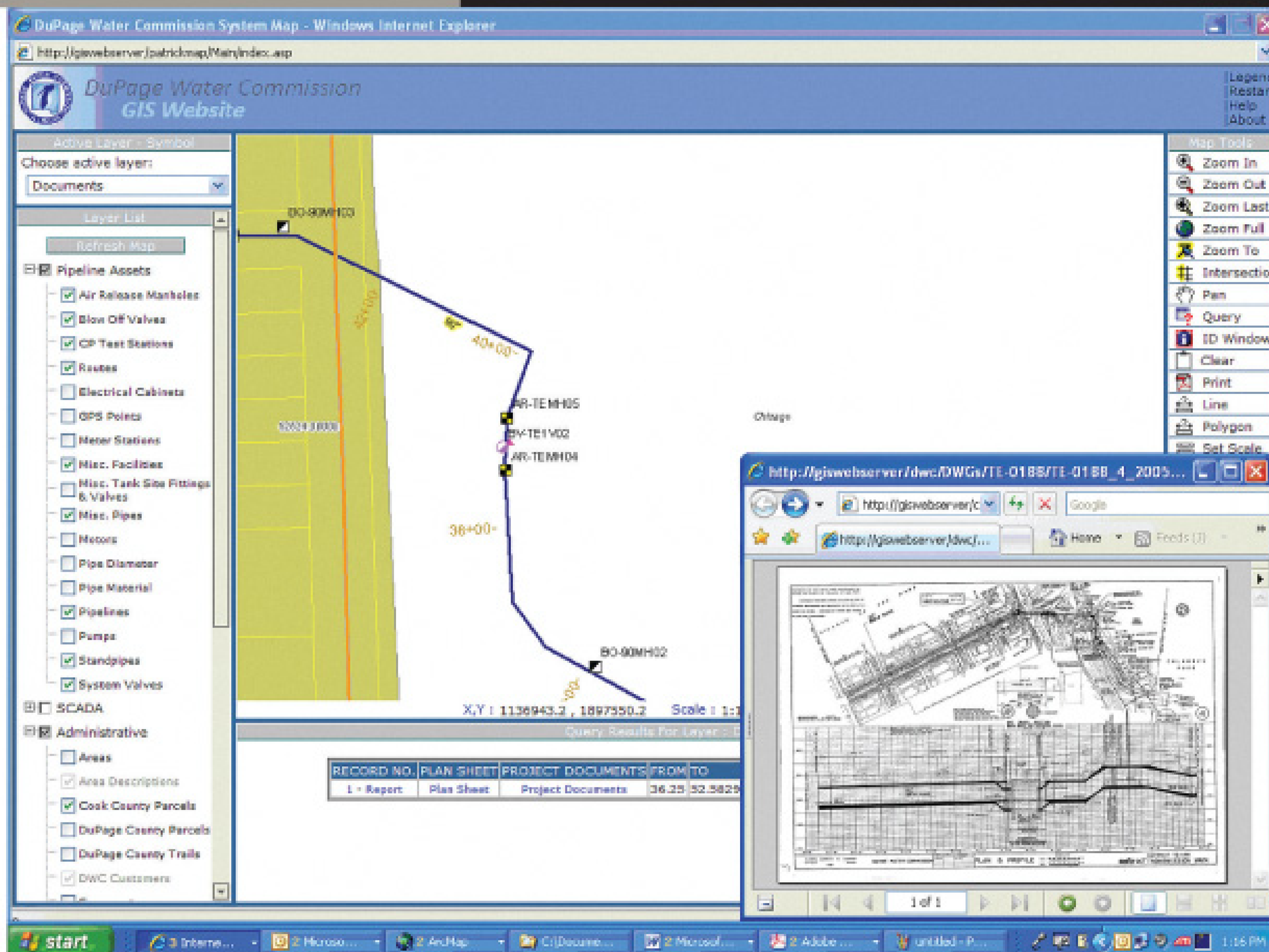


To find out more call us Toll Free (800)-688-8094 ext 245 or visit www.radiodetection.com



Pearpoint 72055 Corporate Way, Thousand Palms, CA 92276, USA

Copyright 2008 Pearpoint Ltd./Radiodetection Ltd - SPX Corporation. All rights reserved. Radiodetection is a subsidiary of SPX Corporation. SPX and Radiodetection and flexitrac, are trademarks owned by Radiodetection Ltd. Due to a policy of continued product development, we reserve the right to alter or amend any published specification without notice.



BETTER MOUSETRAPS

PRODUCT:
ArcGIS Pipeline Data Model

APPLICATION:
Water information management

BENEFITS:
Maintains flexibility and captures logic in databases about complex pipeline data editing and management operations

USER:
DuPage Water Commission,
DuPage, Ill.

MANUFACTURER:
ESRI, Redlands, Calif.

CONTACT:
909/793-2853; www.esri.com

A custom ArcIMS Web site allows employees to search and query attribute data, print maps, and access as-built drawings based on the station values of the selected area.

WHOLESALE CHANGE

A pipeline data model enables an Illinois water commission to map its distribution system and improve its management

By Jessica Wyland

“I started with event tables because all we had was tabular data. Using an event table enabled me to create feature classes. Because the system is static, it lends itself to out-of-the-box tools.”

Frank Frelka

The DuPage Water Commission, a wholesale water distributor in DuPage County, Ill., decided to upgrade its information management system of hand-drawn maps, road atlases and corporate memory.

Following an engineering firm’s recommendations, the commission defined the necessary geographic information system (GIS) layers and datasets, consolidated data, and hired GIS coordinator Frank Frelka. With a background in public works, Frelka first tried to adapt

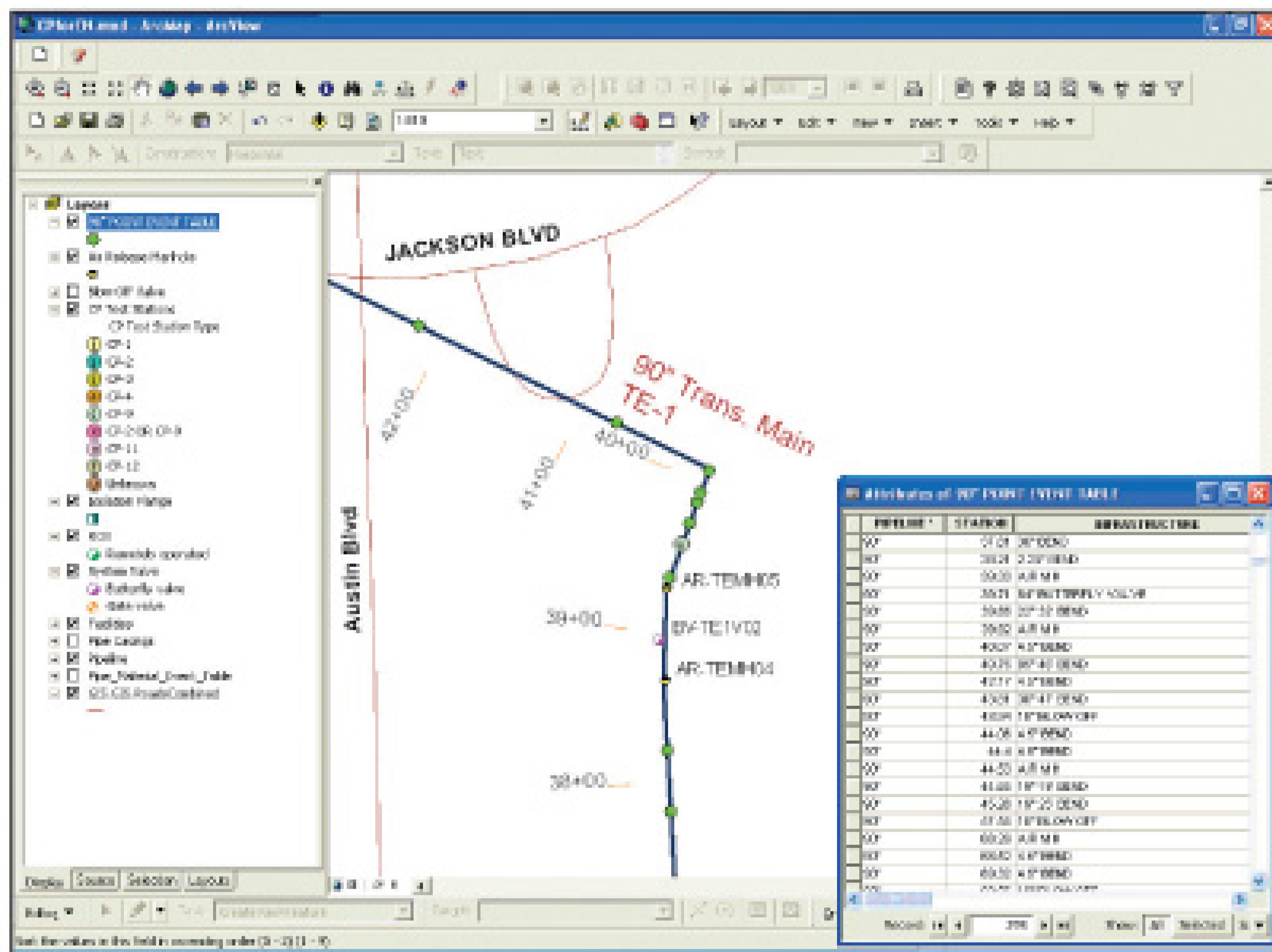
the system to a water distribution data model, but it wasn’t a good fit.

“We had 27 customers, not thousands,” says Frelka. “The feature classes such as service laterals, fire hydrants and commercial and residential customers didn’t apply to our small-scale water distribution network.”

Frelka clued in to the language used by personnel in the pipeline division. “They always talked about stationing along the pipelines,” he says. Remembering a presentation at an ESRI International User

Conference, Frelka visited the company’s Web site and found the ArcGIS Pipeline Data Model (APDM). It met the commission’s primary objective to account for linear referencing of features.

Frelka extracted the 15 feature classes he needed and defined an additional 20. Recalling an old saying about doing something the right way, the wrong way and my way, Frelka did it his way. “With guidance and the template provided by the APDM, it’s working out fine,” he says.



This map shows a 90-inch water transmission pipeline with hatching of station values, air-release manholes, valves and cathodic protection test stations. Also shown are online point events generated from the point event table using dynamic segmentation.

Learning curve

APDM can hold dynamic events and static features. "It took some thinking to realize that events are used for dynamic situations," says Frelka. "Ours was a static situation." Starting with as-built drawings of the nearly 200 miles of water mains, Frelka converted the data into the GIS.

He eyeballed pipelines using the county's centerlines and aerial photos. The pipelines were snapped to GPS points taken by survey every 500 feet and at every visible structure, such as manholes and electric cabinets. Frelka created routes from the pipeline features by using more than 400 known locations of valves and manholes.

"I converted the lines to routes, then assigned measures to the lines," Frelka says. "I had to learn how to calibrate routes working from known locations along the route with associated station values based on linear feet." Since the terrain is flat, he used flat 2-D linear stationing. "Things became complicated with station equations and routes," he confesses.

Substantial savings

Next, Frelka developed an event table of asset locations from

the as-built drawings. Columns included elevations, station values, valve locations, manholes, bends in the pipe, blow-off valves, system valves, CP test stations and casings. He imported the table into ArcMap. With linear referencing, he developed an ArcIMS application that opens as-built drawings for a selected section of pipeline.

"I started with event tables because all we had was tabular data," says Frelka. "Using an event table enabled me to create feature classes. Because the system is static, it lends itself to out-of-the-box tools."

The task initially appeared daunting, but after reading the book, *Linear Referencing in ArcGIS* and completing the exercises, Frelka had the knowledge he needed. His next objective is hydrating the additional feature classes with information and populating a leak table.

The commission also plans to integrate its GIS with the enterprise asset management system and document management system. Frelka estimates that using ESRI's ArcGIS data model instead of a consultant proposal that included database design saved the DuPage Water Commission at least \$8,000. ♦

RHINO

8 lb "JAKE" Manhole Cover Extractor

12 lb "MARY A" Manhole Cover Extractor

- 8 lb. and 12 lb. (4140) ASTM A148 cast steel head breaks frozen covers free easily. Serrated edge strengthens pick-end and eliminates possibility of tool becoming bottlenecked in the cover.
- Combination sledge hammer and pick/pry bar. Two tools in one enables a worker to carry only one piece of equipment into the street.
- Tapered saw-tooth pick fits 5/8" or larger drain holes and most pick slots.
- Top quality handle constructed of fiberglass.
- "Mary A" is patented, patent pending on the "Jake"

Distributed by:
DOUG MEADOWS COMPANY, LLC
1.800.588.3684
Fax (325) 695-7954

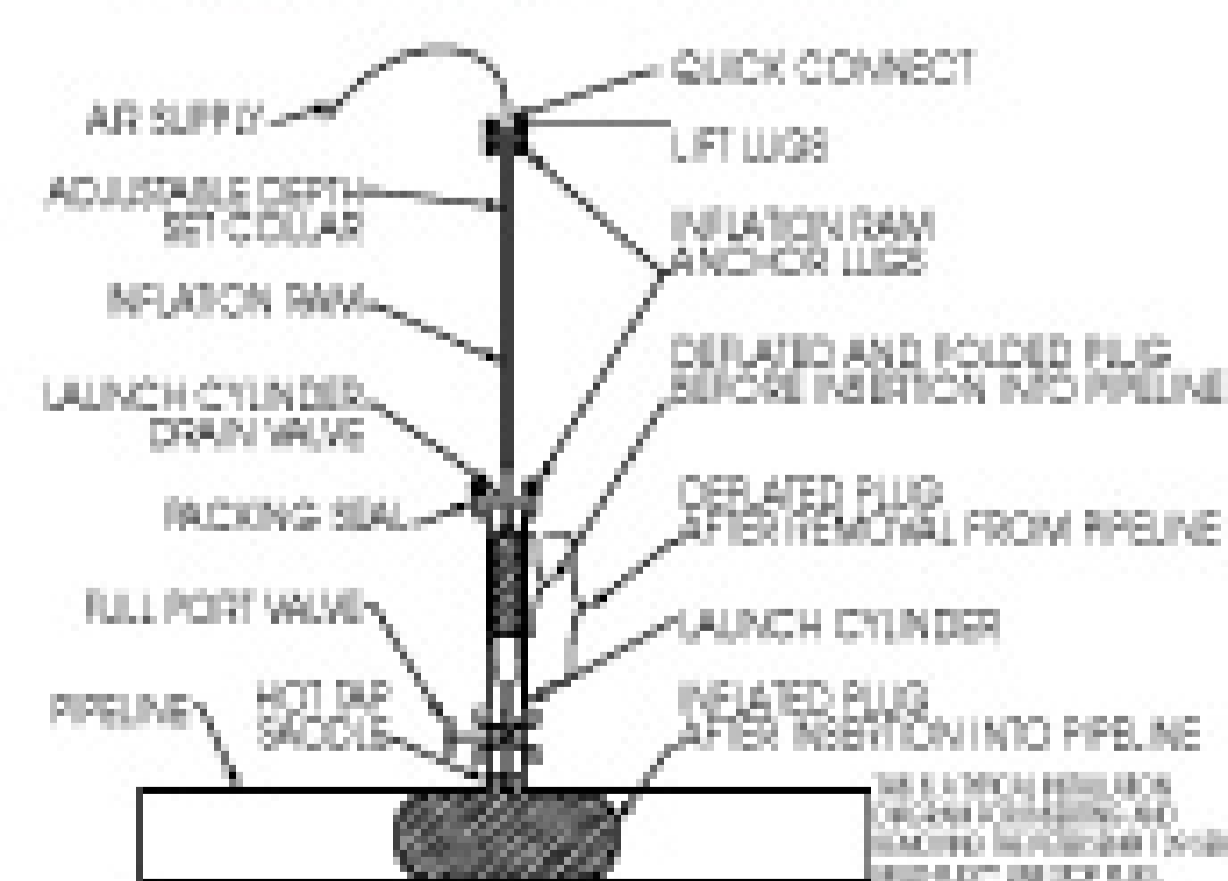
Web site: www.dougmeadows.com

Booth 161

Petersen® Pipe Plugging Systems



Economical Hot Tap Plugging Systems



Pipe Plugs and Packers for all your Pressure, Chemical, and Temperature Requirements.

Call us to quickly customize a pipe plug or plugging system for your specific application.

www.pipeplug.com

Petersen PRODUCTS COMPANY
Serving Professionals Since 1916

PHONE 800.926.1926 OR 262.692.2416
FAX 800.669.1434 OR 262.692.2418



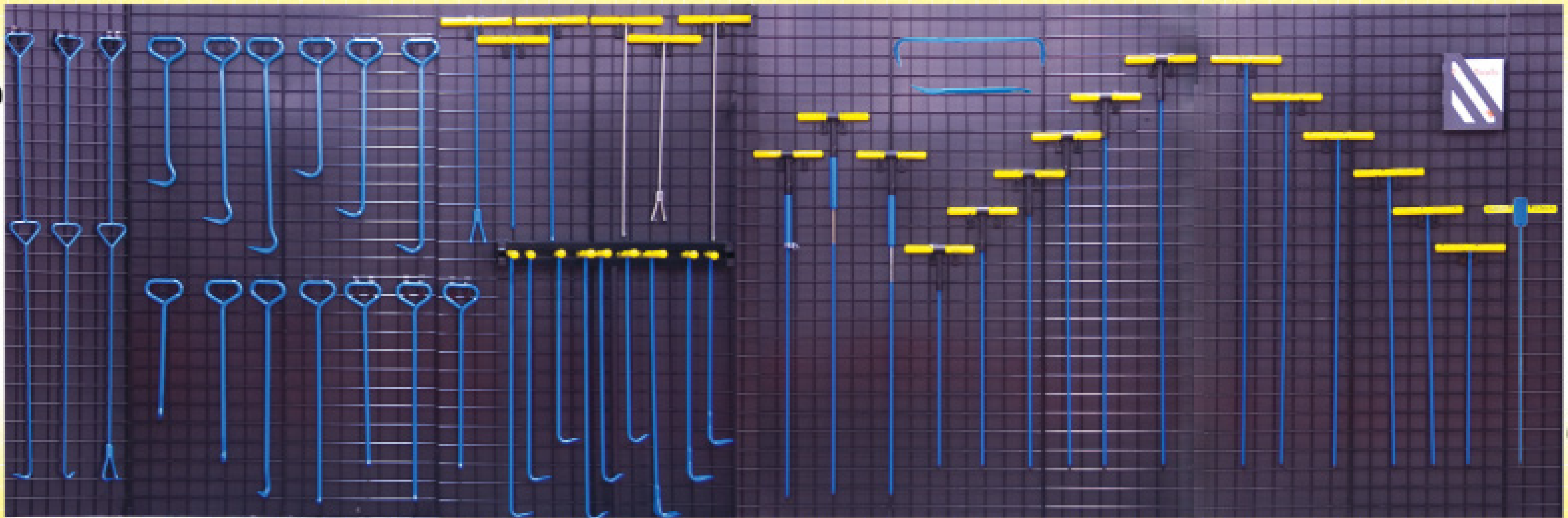
T&T Tools, Inc.

Fax: 800.521.3260
Email: sales@tandttools.com



800.521.6893
www.MightyProbe.com

Call for a FREE Catalog



Call for a FREE Catalog

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

55

Family of Hosted Systems

GPS COP

JARAY Software Inc.

Linkwriter

In Control!

From Field to Office in Realtime!
No printer, PDA, or computer needed!

See us at Booth 4140 in Louisville
Famhost® • 800-658-1676 • www.famhost.com

246

Come In
We're
OPEN 24/7

www.mswmag.com



Presents **THE TRIPLE CROWN**
of Pipe Survey Solutions



CAPTURE. ANALYZE. COLLABORATE.

- Business Partners: Hansen/Neztek, GBA Master Series, ESRI and Azteca Cityworks
- GIS tools to import, insert, filter survey results and identify pipes
- PACP, MACP, and WRc standards built-in
- Powerful analysis tools to help you prioritize and manage your assets more efficiently
- Multiple modules to extend the power of your data



The MODULES

GIS


flexidata™ and its GIS Tools let you export survey conditions to a geodatabase or shape file so you can display conditions where they exist, view them and make decisions.

Manhole

Know, understand and maintain the vital entry points of your infrastructure systems. Collect, analyze and share data about manhole components per the MACP (NASSCO Manhole Assessment Certification Program) format.



The latest in our powerful line of add-ons interfaces with the revolutionary IBAK Panoramo and Panoramo SI technology to create survey data files for measuring, analyzing, capturing pictures and generating detailed reports.



MUNIXS

PACP SURVEY SOFTWARE

- A built-in wizard to guide the user through the required fields and survey process to eliminate the guesswork
- Create data CDs and DVDs within the program to share your movies, pictures and reports without any installation of third party program
- This Xtremely fast, simple and affordable solution is an excellent choice for those new to pipe survey reporting and data collection

Call today for more information or visit us at the Expo for a live demonstration.

PipeLogix, Inc.® | 866.299.3150 | info@pipelogix.com
www.flexi-data.com | www.munixs.com

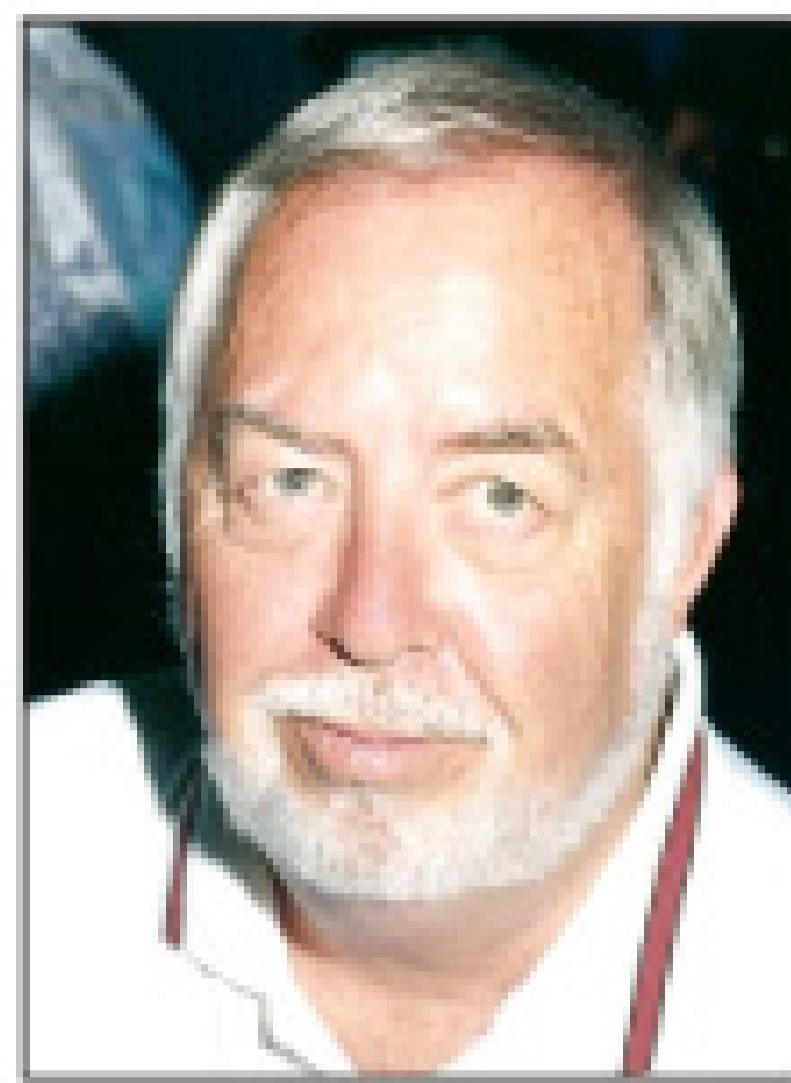
Trademarks provided under license from ESRI.



Expo Booth #158

PipeHunter Designer
John Stoneman Sr. Dies

John Stoneman Sr., designer of the PipeHunter line of municipal sewer equipment, died Dec. 30, 2008, at age 70. He is survived by his wife of 54 years, Betty E. Stoneman. Born June 4, 1938, in Wichita Falls, Texas, Stoneman pioneered the 5-in-1 backhoe for Long Manufacturing and founded South College Garage in Lubbock, Texas; Park Florist in Dallas; ESSI in Hurst, Texas; Chris-Craft of Clear Lake, Texas; Sunshine Sanitation of Houston; Coastal Contractors in LaPorte, Texas; and Underground Inc. in Pearland, Texas, where he developed the PipeHunter line of equipment.



John Stoneman Sr.



MyTana Seeks Unusual Moments

MyTana Manufacturing Co. Inc. is seeking interesting, unusual or amazing moments captured with a MyTana or other camera system. The moments will be posted on the company's Web site and YouTube, as well as displayed at the Pumper & Cleaner Environmental Expo International in Louisville, Ky. Viewers will be able to vote for the most interesting moment. The winner will receive a MyTana accessories package. To enter or vote, go to www.mytana.com.

Federal Signal
Launches Online Store

The online store from Federal Signal Environmental Solutions Group, www.fssolutionsgroup.com, features fast search capabilities to locate and buy thousands of parts and accessories for the Guzzler brand, as well as the Vactor HXX and other vacuum excavators. ♦



IT'S A **Bag Full**



mswmag.com

- > Classifieds
- > Used Equipment
- > E-zines
- > Product Categories

Have you seen the **MUNICIPAL SEWER & WATER™** E-Zine?



Go to mswmag.com to view the e-zine.

CONSERVATION IS EVERYONE'S RESPONSIBILITY

*Proven for
over 20 Yrs.*



**ENVIRONMENTALLY
SAFE**

*Made in
the USA!*



Lateral Lining



Epoxy Coatings



**NO VOCS
NO ODORS
NO STYRENE
NO LEACHING**

Sectional



MH to MH Liner



MUNICIPALITIES
***"BE THE SOLUTION, NOT
THE PROBLEM"***



STEPHEN'S TECHNOLOGIES

1-888-S-T-E-P-H-E-N or (863) 438-8783 Fax (863) 439-3755

STOP THE NEGATIVE SELLING

Salespeople and engineers must trade only in fair and honest information when discussing trenchless technologies for specific applications

By Irvin Gemora

Let's face it. When you're in the sewer industry for decades you see a lot. One thing I'm tired of is negative selling. This destructive sales technique threatens the growth of old and new technologies and endangers the entire trenchless technology industry.

It's negative selling when a salesperson takes down the competition by providing negative and false information to an engineer in order to win business. Young engineers or others who specify projects are easily influenced and sometimes honor the information they receive. A salesperson who builds a business case this way is no different from a person shaming someone else to build himself up. It's unethical no matter how you look at it.

Case in point

I recently observed an older engineer who was not completely comfortable with trenchless technology but found the need to use it thrust upon him. After listening to several salespeople tell him how bad other products were, he concluded that none of the trenchless solutions available to him were worth the risk.

He recommended a cut-and-cover solution to his boss because he knew it worked. Fortunately, he was directed to do some research, and in the end he specified a trenchless solution for the project. All went well, and the engineer now knows how misleading negative selling can be.

Both salespeople and engineers have an obligation in the selling process. When salespeople visit with engineers, it should be their intention to educate them about the aspects of their product or service that will ensure a successful project in the most cost-effective way.

Salespeople should speak about the unique selling proposition their products offer. They should tell why their products offer a competitive advantage and a viable solution for the job at hand. At no time should a salesperson provide misleading information about a competitor.

Engineers cannot submit to intellectual laziness during a sales pitch. Trained to think critically, they have a responsibility to learn the positive and negative aspects of each product or service they consider by obtaining engineering facts and checking references

through independent sources. No product or service is perfect for every application. The job of deciding what is best for the project should not be based on a salesperson's perception of the competition.

Take the pledge

Years ago, I called on an engineer to get my product into a list of approved bidders. The engineer opened by saying, "Your competition has told me about the problems with your product. You tell me about the problems with his product."

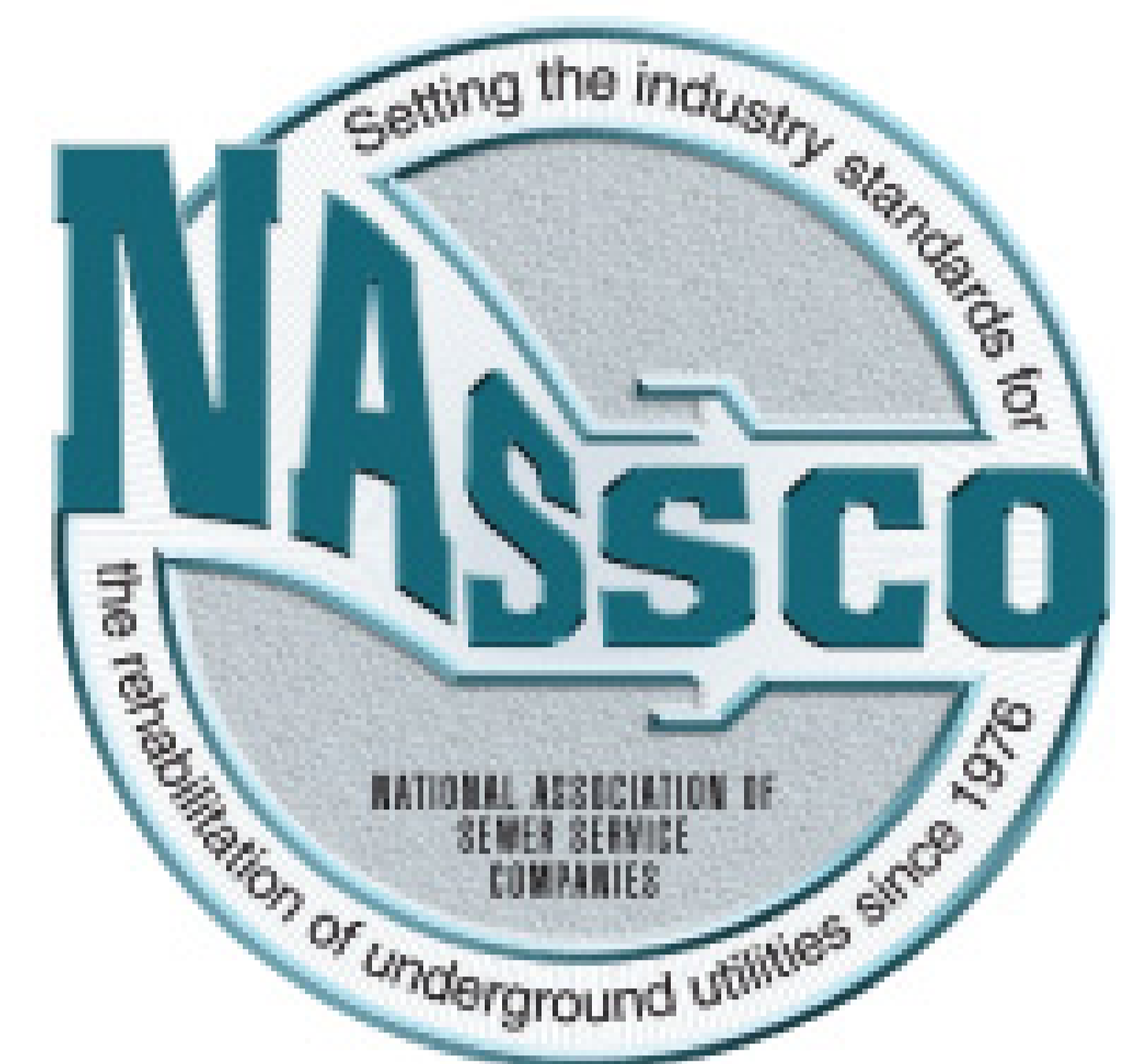
I replied, "My competitor's product is a good one. Let me tell you why mine is better." I convinced him that he had been given

Every NASSCO member has signed a pledge statement that includes a phrase worth repeating here: "Our integrity, ethics and technical competence are the source of our strength. They provide the industry's corporate intelligence and determine its reputation."

wrong information, and ultimately I was placed on the approved bidder list for his project.

I wish I could say I won the bid. I lost on price, but the good news was that the engineer understood, perhaps for the first time, that he was doing his job of selecting qualified bidders by using biased and misleading inputs. That engineer is now known in his area as one who takes control of meetings and does not accept product information from competitors about each other.

I understand these are challenging economic times, and many people in our industry are concerned about their businesses. But negative selling is not the answer. People do business with people they like. That will never change, no matter what the economy is doing.



On behalf of the leading organization for the trenchless technology industry, I urge you to join me in this call to action: If you are using negative selling in your work, stop it. It is destructive to the entire trenchless industry.

If you are an engineer who allows salespeople to provide information about their competitors, stop it. It diminishes your professionalism. I encourage you to share this article with your employees and colleagues, incorporate best selling techniques at your next

sales meeting, and educate engineers to identify negative selling.

Every NASSCO member has signed a pledge statement that includes a phrase worth repeating here: "Our integrity, ethics and technical competence are the source of our strength. They provide the industry's corporate intelligence and determine its reputation."

Whether or not you're a NASSCO member, I hope you adhere to this statement. It's the rising tide that will lift all boats. Our industry will only benefit if all of us do the right thing. Please join me. ♦

Irvin Gemora is executive director of NASSCO. He can be reached at director@nassco.org. The NASSCO headquarters is at 11521 Cronridge Dr., Suite J, Owings Mills, MD 21117.

STEP UP


Take a stand for better and higher quality CIPP installations.

Complete Nassco's two-day Inspector Training Certification Program (ITCP) and expand your knowledge of CIPP technology, the fastest-growing method for sewer pipeline rehabilitation.

Why is this training important? Because it's critical to everyone involved in CIPP design and inspection. Consulting engineers know their reputation depends on successful installations, and municipalities can relax when they hire an ITCP-trained expert, knowing the job will be properly inspected. But most importantly, with NASSCO's ITCP, the industry's most rigorous and well-respected training programs, everyone wins by improving standards for higher quality CIPP installations.

Please call or visit our website for training dates and registration information.

NASSCO, Inc. (410) 486-3500 www.nassco.org





In the year 1957

Leave it to Beaver debuted on TV.
Eisenhower was President.
Sputnik was launched.
A stamp cost 3 cents...



**And we were manufacturing the first
pipe inspection cameras.**

You can trust the worldwide leader of pipeline inspection products.

Please visit booth #2130 and see the future of pipeline inspection systems from the people who started it all. Since 1957 IBAK has lead the industry in innovation and quality. Let us help you reduce your costs and increase your productivity.



3

www.rapidview.com

THINK INSIDE THE BOX

A mobile base station for pipe inspection from CUES Inc. provides wide flexibility for varied site conditions and for different operating needs

By Gil Longwell



The K2 Base Station from CUES Inc. approaches CCTV pipe inspection from the perspective of deployment flexibility. The unit is built with the ability to deploy to a wide range of field locations, each with their unique access or navigational challenges.

The system is designed to provide compactness, versatility and affordable cost. The K2 is in essence a deployment and control

CUES Inc. engineering technician German Martinez demonstrates the wireless hand-held controller that is part of the K2 Base Station system.



TECHNOLOGY TEST DRIVE

EQUIPMENT:
K2 Base Station

MANUFACTURER:
CUES Inc.
407/894-0190
www.cuesinc.com

LOCATION OF DEMO:
Orlando, Fla.

DEMONSTRATED BY:
German Martinez,
Matt Spears, Paul Stenzler,
all of CUES Inc.

LIST PRICE:
\$75,000 (Base Station,
transporter, camera)

The K2 Base Station inspection system includes on-screen diagnostics that help operators resolve many issues in the field without a service technician's intervention.

system. It can be a relatively inexpensive first step into CCTV, or a complement to an existing inspection technology toolbox.

The system is a two-component control and data-capture system. It requires a transporter and camera, yet even with those two components it can be configured for one-man transport to an inspection port or manhole.

Installed in a dedicated vehicle, configured as a single stacked unit with its own wheels and handle bars in the manner of a hand truck, or mounted in a weather-proof, vandal-resistant steel box, the system's deliverability is only limited by its mode of transport. The box can be fork-lifted into a pickup truck's bed, into a box truck, onto a boat or barge, or

onto an ATV. On site, it can send a transporter and camera up to 1,200 feet down the line.

The system, mounted in a zero-emission electric vehicle, was demonstrated in Orlando, Fla., by CUES personnel in sewers owned by the Orange County Utilities Wastewater Division in a light commercial neighborhood. German Martinez and Matt Spears, engineering technicians, and Paul



The system is designed to provide compactness, versatility and affordable cost. The K2 is in essence a deployment and control system. It can be a relatively inexpensive first step into CCTV, or a complement to an existing inspection technology toolbox.

Stenzler, vice president of sales, put the system through inspections of more than 1,000 feet of 6- and 8-inch lines.

Walk-around

The K2 control box is a cube of roughly 30 inches that houses a computer and keyboard, a display screen, an image/data recorder and a behind-the-scenes control connection to the other system component, the cable reel assembly. The reel assembly (about 30 by 30 by 36 inches), manages up to 1,200 feet of multipurpose CCTV and retrieval cable that links a transporter and camera to the control box. (The camera and transporter are not part of the K2 system.)

Mounted in the control box is a computer designed and built by CUES with impact and shock resistance. An external laptop or rack-mounted computer captures visual data, which can be formatted in PACP or WRc files. Using Granite

XP software from CUES, the files can be exported to the ESRI ArcGIS mapping software. Files are also exported to asset management applications from Infor Public Sector (formerly Hansen Information Technologies), Azteca Systems (CityWorks), and GBA Master Series. All visual, verbal and alpha-numeric data is recorded digitally and can be copied to a CD, DVD or memory stick. It can be sent by direct connection (ethernet) to another computer or other network device, or by e-mail.

Some adjustments to cable reel performance can be made from the K2 Base Station control panel.



Three equipment groupings are available for the K2 Base Station: At the left, a controller stacked on a cable reel; at the right, the controller and cable reel as a dolly-mounted handcart, and in the center, the two components mounted in an inspection vehicle.

When the transporter, cable reel or the base station itself encounters difficulty, the unit has an internal diagnostic program that helps the operator solve the problem in the field. This menu-driven application is keyboard-accessible on-screen.

The mechanical cable reel assembly controls are accessible at the top front of the unit. Some aspects of the reel's behavior can be controlled through the base station. A tension-sensing bar is in constant contact with the cable in the payout or retrieval modes. The cable jacketing materials and underlying layered synthetic wrappings of the conductors and connectors help prevent abrasive wear.

Operation

After the inspection vehicle was parked and cones positioned for traffic control, the CUES demonstrators used a single electrical connector to join the transporter, with camera already mounted, to the tethering/control cable. Once connected, they used a hook on the end of a telescoping rod to lower the transporter into position in the manhole and move it a few feet into the pipe.

Once secured, the operator began the traverse. The rate of travel is determined in part by the pipe diameter and material, the

work assignment and the transporter's wheels or treads. This demonstration captured data at forward speeds ranging 30 to 50 feet per minute. During the demonstration, the transporter moved through an intervening, straight-through manhole without difficulty. If a steerable transporter is used, it can be maneuvered through a Y intersection manhole during traverse and retrieval.

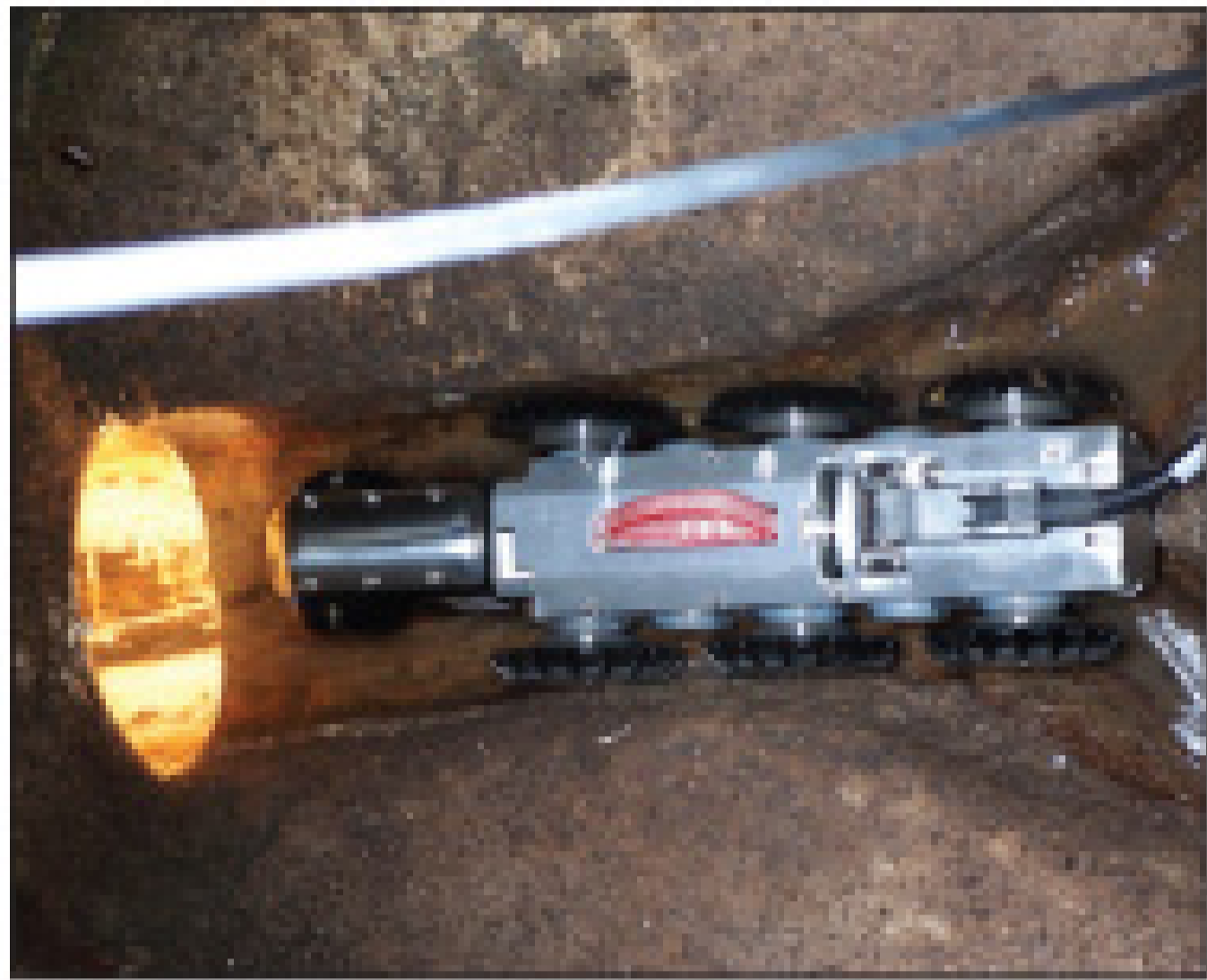
The team demonstrated how operators interface with the computer using a keyboard, joystick or wireless game-type controller. A microphone and sound-capture capability enabled them to add verbal comments.

The transporter and camera are controlled through the base station. Customary functions for direction, speed, retrieval and pan/tilt are accessed through a wired or wireless handheld remote.

The transporter was retrieved with minimal operator intervention since retrieval was not dependent upon the operator's skill at matching the transporter's backing movement with cable uptake. The demonstrators showed how the tension-sensing bar enables even and trouble-free take-up. Its range of motion was electronically monitored and, based on the bar's position, reel

The demonstration unit was powered by the on-board batteries of the electric inspection vehicle. DC current was routed through an inverter to deliver 110V AC power.





Seen from above, the transporter has been introduced to the sewer line channel and is ready to be driven into the pipe.

rotation was controlled.

When it was time to bring it home, the transporter was put into neutral, and the reel whisked it home at a 110 feet per minute.

All these activities were managed using the wireless controller. When the work site and conditions allow, the operator can sit in an included folding chair under a vehicle access door or under the steel cube's lid.

The CUES team showed how video cable connectors can be repaired or replaced in the field without the need for ScotchCast curing material. This and the on-board diagnostics diminish the

likelihood of significant downtime. All inspection data was saved to a laptop computer for later transfer and subsequent evaluation.

Observer comments

The system is flexible enough to get to remote infrastructure locations. Unless configured in a built-in mode, the components can be demounted and transported individually with a minimum of effort. For this demonstration, the base station was mounted in an all-electric vehicle that has a smaller footprint than a Sprinter van.

The unit was powered by the vehicle's on-board batteries. The DC current was routed through an inverter to deliver 110V AC power. In other configurations, an external AC power source is needed: a gas or diesel generator, an engine-driven AC generator, or a wall outlet.

Whether in the electric vehicle or in a steel box in the bed of a pickup, there is limited shelter for the operator or for equipment protection. Sheltered under the truck's rear hatch, screen glare was minimal and the picture was bright enough to let the operator recognize pipe defects and displayed data.

“The market said, ‘We want a compact, versatile control center, mountable in a variety of delivery vehicles that will enable inspection of wastewater or stormwater pipes with diameters from 3 to 200 inches.’”

Paul Stenzler

The hand truck model can be fitted with an antiglare hood. This configuration offers no weather protection, but it can reach remote access points even inside buildings, where a vehicle cannot go. The multiple control methods can suit any site conditions and operator preferences.

Manufacturer comments

The K2 Base Station resulted from years of municipal and private sector operator experience and feedback. “The market said, ‘We want a compact, versatile control center, mountable in a variety of delivery vehicles that will enable inspection of wastewater or stormwater pipes with diameters from 3 to 200 inches,’” says Stenzler.

“The integrated wireless controller is designed to ease transporter insertion in challenging or isolated field environments,” he

says. “Once inserted, the operator turns his attention to the base station for the traverse and data collection.” ♦

MORE INFO:

- 256** **Azteca Systems Inc.**
801/523-2751
www.azteca.com
- 18** **CUES Inc.**
407/894-0190
www.cuesinc.com
- 20** **ESRI**
909/793-2853
www.esri.com
- 237** **GBA Master Series Inc.**
800/492-2468
www.gbams.com
- 255** **Infor Public Sector**
800/260-2640
www.infor.com

TREATMENT PLANT OPERATOR

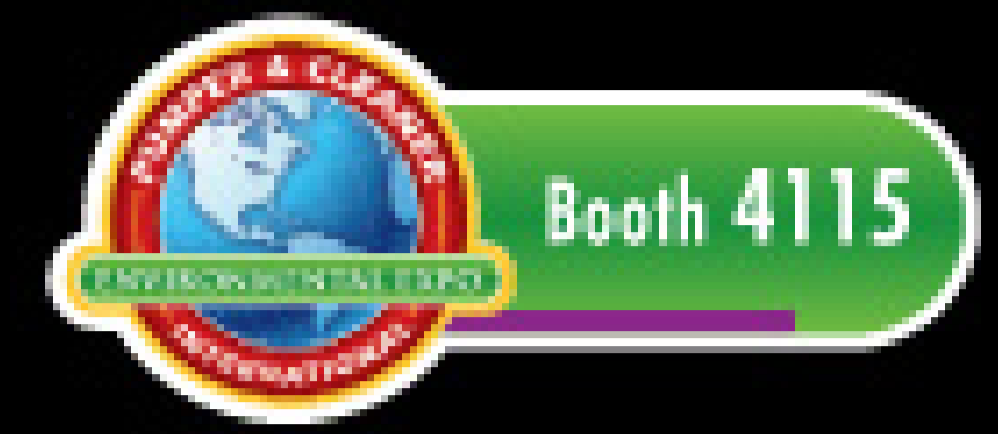
tpo™

You Care for the Pipes.
What's New at the Plant?

Now there's a magazine written solely for professionals who manage and operate municipal wastewater treatment facilities: **Treatment Plant Operator™**. It's dedicated to helping you and your team meet permit limits, achieve performance excellence, progress in your careers, share information with peers, and celebrate accomplishments.

Get your FREE subscription today. 800-257-7222 or tpomag.com

ALL THE TOOLS OF THE TRADE. FROM ONE SOURCE.



AQUATECH

COMBINATION MACHINES ENGINEERED & BUILT AROUND THE OPERATOR.



O'BRIEN®

JETTERS THAT PAY FOR THEMSELVES. AGAIN, AND AGAIN, AND AGAIN.



ultraVac®

THE NEW POWER IN HIGH VACUUM LOADERS.



X-vac®

VACUUM EXCAVATORS. THINK OF THEM AS SURGICAL INSTRUMENTS.



When you invest in any of the Hi-Vac Corporation Brands, you are getting "The most value for your money". They are designed to be the easiest to operate. Cost less to maintain. And, are built tough to withstand the test of time.

Hi-Vac®

HI-VAC® CORPORATION

740-374-2306
USA 800-752-2400
FAX: 740-374-5447
hi-vac.com

ACCESS FOR EVERYONE

A California committee helps make sure that wastewater agencies of all sizes get quality training in collection system operation and maintenance

By Jim Aanderud



The Southern Sections Collection Systems Committee: from left, Duane Johnson, Dave Badgley, David Aznar, Rick Lewis, Bev Stumman, Joe Flores, James Gusman, Jim Aanderud, Mark Chamberlin and Denis Pollak. (Photo by George Solano)

Focused goals and long-term commitments have helped wastewater departments throughout California experience success. Their achievements relate directly to knowledge and the ability to disseminate it, mostly through training.

A group in Southern California has helped foster quality collection system training over the past 17 years. This group, the Southern Sections Collection Systems Committee (SSCSC) of the California Water Environment Association (CWEA), provides an example for other state and regional industry associations to follow.

In 1991, a group of collection managers from around Southern California met to discuss their training needs. The exchange addressed inequities in training between large, medium and small agencies. "We found that large agencies had vast resources, while medium and small agencies lacked those resources, but often had valuable experience to share," recalls past CWEA president and current SSCSC chairman Denis Pollak.

The idea emerged that agencies

of every size should have the same access to training. The SSCSC grew out of that idea. Working within the CWEA, it offers training specifically for collection system personnel across all of Southern California.

Getting certified

The CWEA, with seven of its 17 sections located in the southern part of the state, serves some 8,500 wastewater professional members with conferences, training, awards and publications.

Its most important function is a certification program for collection system maintenance, wastewater treatment plant maintenance, laboratory analysis, biosolids land application, environmental compliance inspection, and industrial treatment plant operations. There are four certification grade levels (I through IV) for each discipline.

CWEA administers the certification program by providing monthly computer-based testing. A professional who achieves certification must maintain it by getting at least 12 contact hours of training in his or her discipline every two years.

That is where the SSCSC comes

into play. The committee meets the training needs of collection personnel with at least three workshops per year. "We pretty much have workshops down to a science," says Rick Lewis, a past chairman. "Our database of knowledgeable speakers covers most any topic in the collections field."

Mark Chamberlin, a past chairman, adds, "We were not satisfied with just fulfilling the contact hour requirements. We wanted to provide quality education that keeps our members on the cutting edge

committee helped the Colorado River Basin Section (CORBS) with a hands-on collections training workshop in 2007.

"Having worked side by side with our committee, CORBS was able to hold their own workshop the following year," says Duane Johnson, SSCSC co-chairman. "It was such a success that they plan on continuing the tradition for the foreseeable future."

SSCSC has also provided hundreds of hours of collections training at the Tri-State Seminar in Primm, Nev. This annual event is sponsored by CWEA, the Nevada WEA and the Arizona Water & Pollution Control Association.

In 2009, for the third straight year, the committee will offer a complete six-hour collection system class on Education Day, Feb. 25, at

"We were not satisfied with just fulfilling the contact hour requirements. We wanted to provide quality education that keeps our members on the cutting edge of new technology and best practices."

Mark Chamberlin

of new technology and best practices." In fact, speakers must follow strict rules, and their abstracts are thoroughly checked out in advance to ensure that the presentations are generic and not "sales pitches."

Enjoyable, productive

SSCSC makes every effort to provide an enjoyable and productive environment. "Our city, like many others, sees the workshops as the cream of the crop," says SSCSC treasurer James Gusman. "In fact, our employees are eager to attend."

The committee has helped a number of local sections initiate their own collection system training programs. For example, the

the 29th Annual Pumper & Cleaner Environmental Expo International in Louisville, Ky.

Planning for workshops

SSCSC meetings are held monthly around Southern California, some at members' agencies or offices, others at future workshop venues. The primary focal points of each meeting are the upcoming workshops.

The planning of a workshop begins with a discussion of topics. Topic selection is driven by current issues in the workplace and feedback from various agencies. Of course, the staple topics of safety and operations are covered regu-

larly. The SSCSC has three types of collection workshops:

- General workshops that cover general collection topics
- Specialty workshops that focus on one subject, such as approaches to pipeline rehabilitation
- Technical certification program workshops that prepare collection personnel for testing in specific areas.

The topics often dictate the workshop locations, and so can the size of the classroom facility. A key consideration is space where vendors can set up displays. Ideally, the exhibit space is near the lunch area, as that encourages interaction between vendors and attendees.

From time to time, the committee offers hands-on workshops where an instructor teaches from a particular piece of equipment. In this case, there must be an outdoor area that accommodates the equipment and the class.

ignates a workshop chairperson who filters every decision and every function. If the buck doesn't stop somewhere, important tasks will fall through the cracks.

The SSCSC has created a checklist that ensures that each workshop is thoroughly planned. As the workshop date approaches, communication among committee members increases. Final details are worked out, and adjustments are made. Up to the day of the workshop, the committee tracks the number of registered attendees. If the count is low, members contact their peers at other agencies in order to encourage them to sign up.

On the day of the workshop, committee members arrive at 6:30 a.m. to prepare for the arrival of attendees and vendors. One committee member is responsible for organizing the vendors.

Tables and chairs should have been delivered the day before, and the committee begins setting up a

istration packets, enjoy a continental breakfast, and talk to vendors.

Vendor relations

Vendors are a big part of an SSCSC workshop: They pay the lion's share of the cost, and they impart important information to the attendees. In fact, the committee refers to exhibit time as "vendor training." Between morning and lunchtime, the vendors have three hours of exposure to the attendees.

Vendors know these workshops are a good value. Even with an attendance of fewer than 100, they will have quality time with employees from 20 or more agencies. That value far exceeds their cost of participation.

Once the classes begin, the attendees are directed to the classroom, where a moderator welcomes them, lays down the ground rules for the day, and introduces the speakers. Each class is limited to just under one hour, meeting the time require-

Some vendors donate T-shirts and hats, while others purchase items such as flashlights and pocketknives to which they affix their business cards. The committee also commits a few hundred dollars to purchasing top prizes like tool kits and DVD players.

At the end of the day, everyone leaves happy. The attendees have fulfilled a significant part of their contact-hour requirements, and SSCSC committee members have completed another successful workshop.

Looking to the future

Each year, supervisors and superintendents look at their employees' training needs and consider where to send them to keep their contact hours current. With this in mind, the SSCSC schedules annual workshops in three counties. That means hundreds of cities and agencies can schedule training far in advance.

The SSCSC holds an annual workshop in Riverside County or San Bernardino County each spring. The 2009 workshop is at the City of Riverside. An annual Orange County workshop is held each summer: It is close to the ocean, where the weather is cool. The 2009 session is at Irvine Ranch Water District in Irvine. The fall workshops are held in San Diego County.

A workshop subcommittee has been formed for each workshop. This changed the landscape of the committee, taking the bulk of the work off of a few members and spreading it out among many. Each subcommittee is responsible for workshops in their local county. This limits the commitment to three months each year.

As this workshop system matures, the SSCSC hopes to expand the annual workshop commitment to other areas around Southern California. The committee continues to meet monthly as it forges ahead with new plans and new ideas that raise the bar in collection system training.

There are few people willing to give of their time and energy for the betterment of the industry. But those who do should know their sacrifice makes a difference.

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



Rick Lewis teaches nozzle technology at an SSCSC workshop. (Photo by Jim Aanderud)

Finally, the chosen site must have enough parking. Since most workshops are held at agency facilities, planners also must consider the effect on the agency's operations.

Handling the logistics

After identifying a location the committee often schedules a future meeting there to look it over and fine tune the planning. Workshop planning and execution are most effective when a single party is in charge. The SSCSC des-

ignates a workshop chairperson who filters every decision and every function. If the buck doesn't stop somewhere, important tasks will fall through the cracks.

ignates a workshop chairperson who filters every decision and every function. If the buck doesn't stop somewhere, important tasks will fall through the cracks.

ignates a workshop chairperson who filters every decision and every function. If the buck doesn't stop somewhere, important tasks will fall through the cracks.

ignates a workshop chairperson who filters every decision and every function. If the buck doesn't stop somewhere, important tasks will fall through the cracks.

ignates a workshop chairperson who filters every decision and every function. If the buck doesn't stop somewhere, important tasks will fall through the cracks.



Louisville '09
YOUR PLACE. YOUR TIME.

EDUCATION DAY

Wednesday
February 25th, 2009

- Full day of seminars
- Exhibit hall closed
- Schedule subject to change

ROOM C201 & C202

LRN Leaders Resource Network

- 8:00 - 9:00 How to Become a Value Leader
- 9:30 - 10:30 Credit Collections: Getting Paid
- 11:00 - 12:00 The Value of Internet Marketing
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 Selling Value
- 2:30 - 3:30 How to Add Value to Every Customer You Have and Future Customers
- 4:00 - 5:00 How to Determine Your Operating Costs

ROOM C203

WJTA / PSAI / CBSA

- 8:00 - 9:00 What an Air Mover Can Do For You
- 9:30 - 10:30 The Basics of High Pressure Waterblasting
- 11:00 - 12:00 Waterjetting Applications
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 3:30 Understanding Your Cost to Insure Profitability (PSAI)
- 4:00 - 5:00 Cross Bores of Gas Lines in Sewers (CBSA)

ROOM C204 & C205

SSCSC Southern Section Collection Systems Committee

- 8:00 - 9:00 Trenchless Pipe Rehabilitation
- 9:30 - 10:30 CCTV Pipeline Inspections
- 11:00 - 12:00 The Nuts and Bolts of GIS
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 The Nitty-Gritty on Pipeline Cleaning
- 2:30 - 3:30 Confined Space and Protective Equipment Safety Requirements
- 4:00 - 5:00 Manhole Inspections

ROOM B101 & B102

NAWT National Association of Wastewater Transporters

- 8:00 - 9:00 What are My Disposal Resources
- 9:30 - 10:30 Treatment Processes, What is Out There?
- 11:00 - 12:00 Evaluating Costs as Part of the Decision Making Process
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 Meeting Part 503 Requirements
- 2:30 - 3:30 Turn Grease Trap Waste Into Gold
- 4:00 - 5:00 Developing a Business Plan

ROOM B103 & B104

NOWRA National Onsite Wastewater Recycling Association

- 8:00 - 9:00 NOWRA Overview & Industry Trends
- 9:30 - 10:30 Soil & Site Evaluation Overview
- 11:00 - 12:00 Septic Tanks: Function, Inspection, Installation & Trouble Shooting
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 Aerobic Treatment Units & Filters
- 2:30 - 3:30 Pumps & Controls
- 4:00 - 5:00 Operation & Maintenance of Systems

ROOM C101 - C104

NASSCO National Association of Sewer Service Companies

- 8:00 - 9:00 Robotics For the Future, What Does it Mean for You?
- 9:30 - 10:30 Small Diameter Epoxy Coatings
- 11:00 - 12:00 Root Control, How Does it Work and Why is it Needed?
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 OSHA Regulations
- 2:30 - 3:30 Choosing the Correct Chemical Grouts
- 4:00 - 5:00 Trained Technology Inspectors

ROOM C105 - C108

NEHA National Environmental Health Association

- 8:00 - 9:00 How to Work With Regulators and Regulations
- 9:30 - 10:30 Pumps: Operation & Maintenance
- 11:00 - 12:00 Routine Maintenance Inspections
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 Using the Certified Installer Credential to Help Your Business
- 2:30 - 3:30 T.B.D.
- 4:00 - 5:00 T.B.D.

ROOM C109 - C112

SCOTT HUNTER Business Track

- 8:00 - 9:00 The Art of Personal Sales
- 11:00 - 12:00 The Art of Personal Sales (Part 2)
- 12:00 - 1:00 **Lunch Break**
- 1:00 - 2:00 Yes, We Have to Work Together, but Does it Have to be So Painful?
- 4:00 - 5:00 The Art of Being Outrageously Successful!

FEBRUARY 25-28

Kentucky Exposition Center
LOUISVILLE, KENTUCKY | 09



THURSDAY

February 26th, 2009

ROOM C101-C104

Portable Toilet Track

- 8:00 - 9:00 Portable Sanitation Start Up
Hampel
- 9:30 - 10:30 Selling Portable Restrooms Services
Satellite Industries
- 11:00 - 12:00 T.B.D.

ROOM C105 - C108

Liquid Waste Track

- 8:00 - 9:00 Decentralized Wastewater Sustainability - **Aquatest**
- 9:30 - 10:30 Discover the "GREEN ERA" and capitalize on it! - **Lenzyme**
- 11:00 - 12:00 Modular Waste Water Treatment
Big Fish Environmental, LLC

ROOM B103 & B104

Municipal Track

- 8:00 - 9:00 Why Measure Sewer Flows from Private Services? - **City Meter**
- 9:30 - 10:30 Polymer Solutions for Wastewater Treatment - **Fort Bend Services**
- 11:00 - 12:00 Rotary Jets for Material Removal
StoneAge

ROOM C109 - C112

Sewer & Drain Track

- 8:00 - 9:00 Bacteria Mythbusters -
ProClean by Duracable
- 9:30 - 10:30 Solutions for Nineteenth Century Manholes - **AP/M Permaform**
- 11:00 - 12:00 Manholes & Leakage Solutions
Sealing Systems

FRIDAY

February 27th, 2009

ROOM B101 & B102

Sewer Cleaning Track

- 8:00 - 9:00 High Pressure Hose Safety & Proper Use
Spir Star
- 9:30 - 10:30 The Better Jetter, Secrets to Jetting
US Jetting
- 11:00 - 12:00 Chemical Root Control
Vaporooter

ROOM B103 & B104

Business Track

- 8:00 - 9:00 Maintenance Agreements for Commercial Accounts
Spartan Tool
- 9:30 - 10:30 First Rate Customer Service
RooterMan
- 11:00 - 12:00 Insurance and Risk Management
Heffernan Insurance

ROOM C101-C104

Miscellaneous Track

- 8:00 - 9:00 Keys to Proper Power Take-Off
Muncie Power Products
- 9:30 - 10:30 Vacuum Tank, Chassis and Pumps
Amthor International
- 11:00 - 12:00 Lateral Replacement Program
TT Technology

For detailed course information please visit
www.pumpershow.com

ON SITE
installer
CERTIFIED PROFESSIONAL

Certified Onsite Installer Course
Thursday February 26th

All Day Course - 8 a.m. - 5 p.m.
Dave Gustafson, P.E., Jim Anderson, PhD



Louisville '09
YOUR PLACE. YOUR TIME.

EXHIBITING COMPANIES

Current list of exhibiting companies as of January 7th, 2009. List subject to change without notice.

A & L Systems, Inc.
A Corp/Rooter-Man
A Global Chemical Co.
A.R. North America
A.W. Cook Cement Products
Abbott Rubber Company
Abernethy Welding & Repair Inc.
Accent Manufacturing
ACE DuraFlo Systems
Acro Trailer
Adler Tank Rental
Advance Pump & Equipment
Advanced Biological Marketing
Advanced Containment Systems Inc.
Advanced Drainage Systems
Advanced Infrastructure
Advanced Pressure Systems
Advanced Tank Systems
Advanced Tracking Technologies
Advanced Wastewater Systems
AGCO-Ag Chem Division
AK Industries
All Star Equipment Sales, Inc.
Allan J. Coleman
AllGreen Manufacturing, LLC
Allied Graphics
Allied Tank Co.
Alpha Mobile Solutions
Alpine Leasing, Inc.
AltumaMats
Ameri-Can Engineering
American Liquid Waste Magazine
Amerik Engineering
Anchor Graphics, Inc.
AP/M Permaform
Aqua Ben Corporation
Aqua Blast Corporation
Aqua Mole Technologies
Aqua Sales, LLC
Aqua Test
Aqua-Zyme Disposal Systems Inc.
AquaJet Systems AB
Arcan Enterprises Inc.
Aries Industries Inc.
Armal, Inc.
Arthur Products
Ashland Trap Distribution, Co.
Asino
Atlanta Rubber & Hydraulics Inc.
Avanti International
Bad Dog Tools
Badger Truck Center/Badger VACS
BakerCorp
Bakers Waste Equipment
Bandlock Corporation
Banjo Corp.
BASE Engineering
BB & T Insurance Svc. Inc.

BDP Industries
Benjamin Franklin Franchising
Best Enterprises Inc.
Betts Industries
Big Fish Environmental, LLC
Bio Clean
Bio Microbics Inc.
Black Tie Manufacturing
Blasters, Inc.
Blue Angel Pumps
Boatman Industries
Bord na Mona
Bowman Tool Co.
Brenlin Co., Inc.
Bright Dyes/Division Kingscote Chemicals
Bright Technologies
BW Technologies by Honeywell
Cadman Power Equipment
Cam Spray
Canplas Industries Ltd.
Cape Cod Biochemical Co.
Capital Partners
Capital Rubber Corp.
Cat Pumps Corporation
Center Capital Corporation
Century Chemical Corporation
Champion Pump Company, Inc.
Chandler Equipment Inc.
Chelsea Products/Div. of Parker
Chempace Corporation
Chempure Products Corp.
ChemStation International
Cherne Industries Inc.
City Meter, Inc.
Clear Computing
ClearPipe, Inc.
Clearstream Waste Water Systems Inc.
Cloverleaf Tool Co.
Cobra Technologies
Comforts of Home
Concentric Enviro Inc.
Conjet AB / National Hydro, Inc.
Consolidated Treatment
Containment Solutions Inc.
Control Chief
Cook Compression
Coon Manufacturing, Inc.
Corpo-Track Systems LLC
Cosmic Tophat LLC
Cougar Industries Inc.
Coxreels
Crane Pumps & Systems
CreteX Specialty Products
Cross Bore Safety Association
Crust Buster/Schmitz Bros.
CTP Solutions, Inc.
CUES Inc.
CuraFlo

Curry Supply Company
Custom Biologicals Inc.
Cyclops Electronics, Inc.
Dahle USA
De Neef Construction Chemicals
Deal Associates
DekoRRa Products
Del Val Chemical Co.
Delta Environmental
DermaRite Industries Inc.
Diamond International Truck
Ditch Witch
Dometic Sanitation Systems
Doug Meadows Co. LLC
Dr. Shrink, Inc.
Dragon Products
Drainables Direct
Dresser Roots Blower
DropBox Inc.
Dultmeier Sales
Duracable Manufacturing
Durand-Wayland, Inc.
Dyna Flex Inc.
Dyna-Vac Equipment
E.H. Wachs Company
Earth Friendly Chemicals, Inc.
Earth Tool Co.
Easy Liner
Ecological Laboratories Inc.
Ecological Tanks, Inc.
Elastec/American Marine
Electric Eel Mfg. Co. Inc.
Eljen Corporation
Engine & Accessory Inc.
Enviro Sludge Solutions
Environmental Products and Access.
Envirosight LLC
Enz USA Inc.
EPA-MOU Partners
Evergreen Tank Solutions
Explorer Trailers
EZ Trakr
Fabco Automotive Corp.
Famhost Hosted Applications
Fergus Power Pump Inc.
Fibox, Inc.
Fielding Pump
Financial Federal Credit Inc.
FindaPlumber.com
Fisher Research Laboratory
FKC Co. Ltd.
FleetBoss Inc.
Flitz International Limited
Flo Trend Systems Inc.
Flow-Liner
Fluid Systems, Inc.
FM Manufacturing Inc.
FMC Technologies

Forbest Technologies
Force America Inc.
Formadrain Inc.
Fort Bend Services, Inc.
Fournier Industries Inc.
Freightquote.com
Frontier Technology, Inc.
Fruitland Tool & Manufacturing
Gamajet Cleaning Systems
GapVax Inc.
Gardner Denver Waterjet. Sys. Inc.
GEA Houle Inc.
General Pipe Cleaners
General Pump
Giant Industries Inc.
Global Pipeline Systems
Global Tank Leasing
Go For Digger
Godwin Pumps of America Inc.
Goldak Inc.
Gorlitz Sewer & Drain, Inc.
Goulds Pumps/ITT Industries
Granite Leasing Company
Green Leaf Inc.
Guzzler Mfg.
Hackney - Division SVC
Hammelmann Corp.
Hampel Corporation
Hannay Reels
Happy Feet by V.P. Marketing LLC
Harben Inc.
Hart Industries
Haskel International, Inc.
Hauleragent
Hedstrom Plastics
Heffernan Insurance Brokers
Hi-Vac Corporation
Hilbon, Inc./Div. of Ingersoll Rand
High Pressure Equipment Company
Highland Tank & Manufacturing
House of Imports
Hulls Truck Bodies
Hur Chemical Manufacturing
Hurco Technologies Inc.
Hy-Flex
Hydro Engineering Inc.
Hydrodig Canada Inc.
IHI Compact Excavator Sales
Imperial Industries Inc.
Industrial Diversified Products
Industrial Fabrics
Industrial Magnetics, Inc.
Infiltrator Systems Inc.
Infrastructure Repair Systems, Inc.
InfraTech
Insight Vision
ISCO Industries, LLC
ITI Trailers & Truck Bodies Inc.



IVS Hydro Inc.
 J&J Chemical Company
 Jack Doherty Supplies Inc.
 Jag Mobile Solutions
 Jameson LLC
 Jet Inc.
 JETECH, Inc.
 Jetstream of Houston
 John Brooks Company Ltd.
 Juggler by Labrie
 KeeVac Industries Inc.
 KEG Technologies, Inc.
 Keith Huber, Inc.
 Kentucky Onsite Wastewater Association
 Kentucky Tank, Inc.
 Key Commercial Corp.
 KMT Aqua-Dyne Inc.
 Knight Treatment Systems, Inc.
 Kroy Industries
 Kuriyama of America Inc.
 L.C. Tanks
 L.M.T.
 La Place Equipment Co Inc.
 Lane's Vacuum Tank Inc.
 Lansas Vanderlans & Sons Inc.
 Leaders Resource Network
 Leaf Financial Corporation
 Lely Manufacturing
 Lenzyme Incorporated
 Liberty Financial
 Liberty Pumps
 Liquid Environmental Solutions
 Liquid Waste Technology
 Little Giant DBA Franklin Electric
 LMK Enterprises Inc.
 Lock America
 Lodar
 Logiball Inc.
 Longhorn Tank & Trailer
 M.A.R.S. Workwear
 Madewell Products Corp.
 Manhole Guard
 Masport Incorporated
 Max-Life Mfg.
 MaxLiner
 Mid-Continent Truck Sales Inc.
 Mid-State Tank Co., Inc.
 Midwest Gas Instrument Service
 Midwest Trenchless Technologies, Inc.
 Midwest Truck Sales
 Milwaukee Electric Tool
 Milwaukee Rubber Products Inc.
 Mobile Innovative Concepts, LLC.
 Mody Pumps, Inc.
 Moro USA
 Mosmatic Corporation
 Mr. Manhole
 Mr. Rooter Corp.
 MTC
 MTEch
 Muncie Power Products
 MWI Pump
 Myers-Aplex/Pentair Water
 Myers-Seth Pump Inc.
 MyTana Mfg. Company Inc.
 NASSCO
 National Oilwell Varco
 National Precast Concrete Association
 National Truck Center
 National Vacuum Equipment

NAWT Inc.
 Nesco Sales & Rentals
 Netafim USA
 NewTech Inc.
 Nexstar
 NILodor Inc.
 NLB Corp.
 No Flow In Flow/MCSP
 Northland Capital Equipment Leasing
 Norweco Inc.
 Norwesco
 NovaFlex Hose
 NOWRA
 NozzTeq™ Inc.
 NSF International
 Nu Flow Technologies Inc.
 Nu-Concepts
 Nuhn Industries Ltd
 Odour Treatment Essentials
 Ole's Hakai Pass
 Olympia Fiberglass Industries Inc.
 OMI Industries
 OMSI Transmissions Inc.
 One Biotechnology
 Ontario Hose
 Orenco Systems, Inc.
 Painters Union District 53
 Parker Hannifin Corp./PolyFlex Oper.
 Parson Environmental Products Inc.
 Pat's Pump & Blower
 Pearpoint Inc.
 Peinemann Equipment
 Pekasys
 Pelican Worldwide
 Penny Pockets
 Pentair Water
 Perma-Liner Industries Inc.
 Petersen Products
 Pettit Environmental
 Philadelphia Fry-o-Diesel
 Phoenix Industries & Apparatus, Inc.
 PHOENIX Process Equipment
 Pik Rite Inc.
 Pinnacle Manufacturing
 Pipe Genie Mfg. Inc.
 PipeHunter
 PipeLogix Inc.
 PipeTech Software
 Piranha Hose
 Plug-It Products
 Plumbers Success International
 Pollardwater.com
 Poly-Flow
 Poly-Triplex
 PolyJohn Enterprises Corp.
 Polylok/Zabel
 PolyPortables Inc.
 Portable Sanitation Assoc. Int'l.
 PortaJane Inc.
 Posey Hydro Solutions
 Pow-R Devices
 Power Vac Inc.
 Powertrack International Inc.
 Premier Tech Environnement
 Presvac Systems, Ltd.
 Prime Solution, Inc.
 ProClean by Duracable Mfg.
 ProSept Protection Plan
 Prototek
 Pumpbiz

PUMPTEC
 Quadex Inc.
 Quality Service Contractors
 Quality Tank Trucks & Equipment
 Quonics Inc.
 Rabco
 Rainbow Pumping Systems
 RapidView IBAK North America
 Ratech Electronics, Ltd.
 Rausch Electronics USA LLC
 RC Industries Inc.
 Real-Tite Plugs, Inc.
 REED Manufacturing Company
 Reelcraft Industries Inc.
 Reline America Inc.
 Rich Restrooms
 RIDGID
 Ring Industrial Group
 Ritam Technologies
 Robuschi & C.S.p.A.
 Rodman & Co., Inc.
 Roebic Laboratories, Inc.
 RootX
 Roth Global Plastics
 Rothenberger USA
 Roto-Rooter Corporation
 RotoSolutions
 RouteOptix Inc.
 RR USA, Inc.
 RS Technical Services Inc.
 Rush Refuse Systems
 Rush Sales
 Safety Corporation of America
 Safety Pumping Systems, LLC
 Safety Vision
 Salcor, Inc.
 Salem Republic Rubber Co.
 Satellite Industries Inc.
 Sauerisen, Inc.
 Savatech Corp.
 Schonstedt Instrument Company
 ScreenTech Imaging, a div. of Roeda Signs Inc.
 SEACON Brantner & Assoc. Inc.
 SealGuard
 Sealing Systems Inc.
 Semo Tank
 Septic Products Inc.
 Septic Services Inc.
 SeptiTech
 Septronics
 Sewer Equipment & Supplies
 Sewer Equipment Co. of America
 Shamrock Pipe Tools Inc.
 Sherwin Williams
 Shubee
 SIM/TECH Filter Inc.
 Simple Solutions Dist. LLC
 SJE-Rhombus
 SludgeHammer Group Limited
 Smithco Manufacturing
 Spartan Tool LLC
 Specialty B Sales
 Spectrum Equipment Partners Ltd.
 Speedway Drain Cleaning Products
 Spir Star Inc.
 Sprayroq Inc.
 SRECO-FLEXIBLE, Inc.
 Stahly Truck Applicators
 Stamp Works
 Standard Equipment

Stellar Industries Inc.
 Stephens Technologies
 Sto-Away Power Cranes Inc.
 StoneAge, Inc.
 Stormwaterworks.com
 Sunbelt Rentals
 Sunrise Environmental
 Super Products LLC
 Superior Signal Company
 SuperVac 2000
 T & T Tools Inc.
 Tank Technologies & Supply Co., LLC
 TCF Equipment Finance
 The Bosworth Co.
 The Service Program
 The Strong Company
 Thompson Pump
 Toico Industries
 Topp Industries, Inc.
 Tornado Technologies, Inc.
 Tracker Solutions
 Transway Systems Inc.
 Tri State Tank LLC
 TRIC Tools Inc.
 Trident Insurance
 Triple R Specialty
 Tristar Capital LLC
 Triton Services, Inc.
 TRY TEK Machine Works, Inc.
 TSF Co. Inc.
 TSI Tank Services Inc
 TT Technologies Inc.
 Tul-Tite Inc.
 U.E.M.S.I.
 Udor USA
 Under Pressure Systems, Inc.
 URACA/Chemarc Inc.
 US Jetting, LLC
 USA BlueBook
 USB-Sewer Equipment Corporation
 Vac-Con Inc.
 VacAll Industries
 Vector Manufacturing
 Vacutrix Limited
 Vacuum Truck Rental
 Vaporooter
 VAR Co.
 VE Enterprises, Inc.
 Vermeer
 Vivax Corp.
 Wallex Products Co.
 Wallenstein Vacuum Pumps
 Wastequip
 Water Environment Federation
 Water Jet Technology Association
 Weber Industries, Inc. (Webtrol)
 Wee Engineer Inc.
 Wells Fargo Inc.
 Wells Fargo Equipment Finance
 West-Mark Inc.
 Western Mule Cranes
 Westmoor Ltd.
 Wieser Concrete Products Inc
 Wilko Supply
 WinCan America Inc.
 WMI, Inc.
 Wolf Creek Company, Inc.
 WolfCreek Jetting & Mfg., Inc.
 Xerxes Corporation
 Zoeller Pump Company



Louisville '09
YOUR PLACE. YOUR TIME.

HOTEL ACCOMMODATIONS



Louisville has many great hotels to choose from. Some hotels are in walking distance to the expo and some are a quick 10 minute drive from downtown – the choice is yours!

Call the Louisville Housing Bureau for help with your reservation.

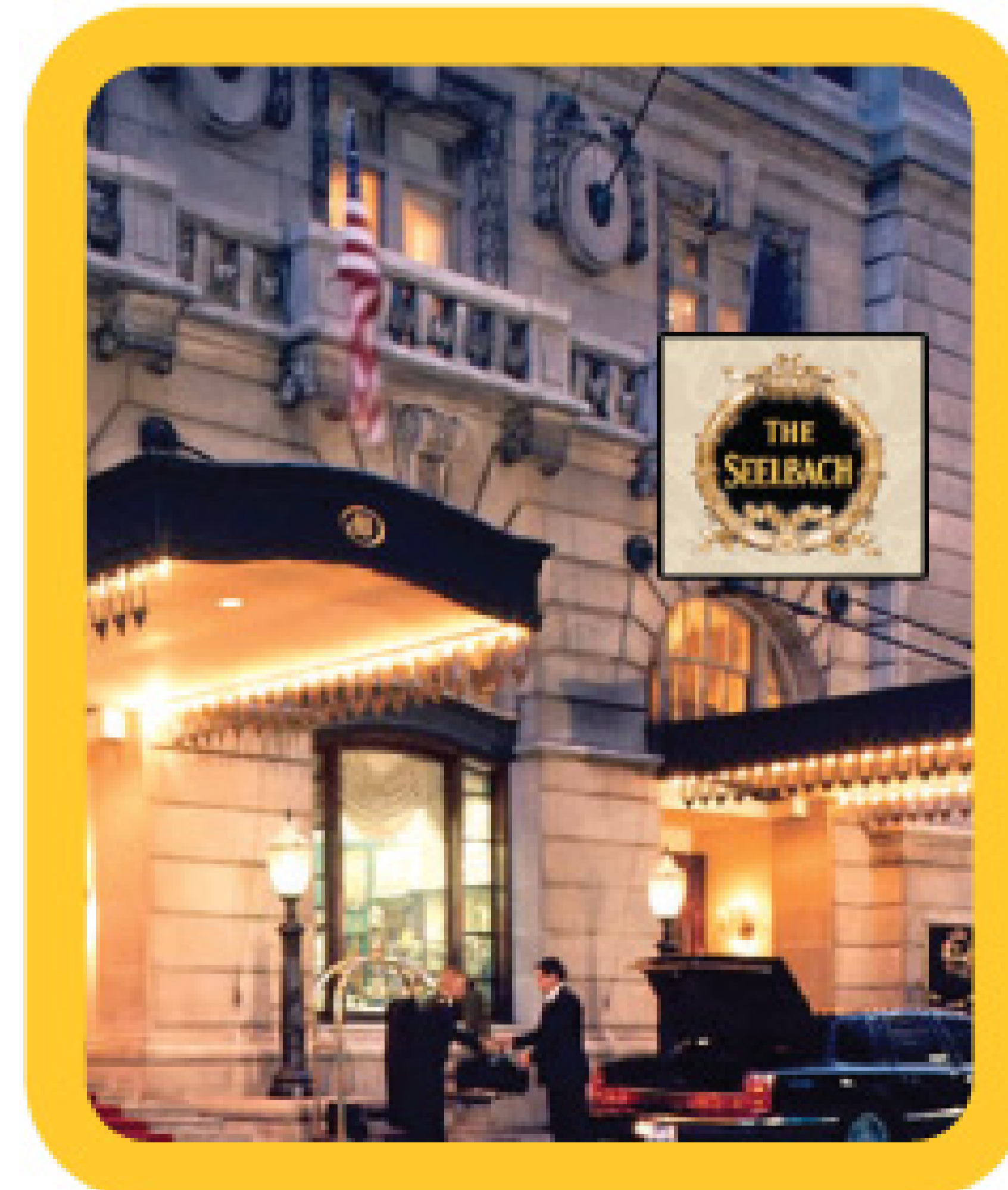
Monday -Friday 9:00 am to 5:00 pm EST

1-800-743-3100 (TOLL FREE)

1-502-561-3100 (INTERNATIONAL)

Or you can make reservations quickly online at **www.pumpershow.com/hotels**

Most official Expo hotels have shuttle bus service to the Expo hall. Please refer to the website for details.



Louisville '09

YOUR PLACE. YOUR TIME.



Connect & Network.

Questions Answered.

Hands On.

New Products.

Hands On. Questions Answered. New Products. Networking.

Over 10,000 Attendees
Over 500 Exhibitors
Over 50 Educational Seminars

**Don't miss out,
Register Today!**



FEBRUARY 25-28 • **Louisville, KY**

WWW.PUMPERSHOW.COM • **800.257.7222**

BUSINESSES

Very successful established Midwest based full service Trenchless Sewer Company with municipal and industrial experience and contacts available for acquisition. Serious confidential inquiries only. Please respond to P.O. Box 170053, Irving, TX 75017-0053 or email: cippcompany@yahoo.com. (CM4)

DEWATERING

DeTainer DT30 full stainless steel, cold weather insulation, rolling roof, \$40,500. DeTainer DT30 stainless interior screens, carbon exterior, \$29,950. Muffin Monster grinder w/controls; skid mounted, in-line, \$16,000. DeTainer (2) self tipping hopper units w/stainless interior 3.5-yd., each \$5,000. 21,000 gal. frac tank, CPC, \$26,000. Stacking conveyor for belt press, radial, stainless steel, 18 inches wide, 36 feet long, elec-drive, \$9,500. Pit Hog electric dredge. 1998 Mack spreader truck w/floatation tires and 4,000 gal. Huhn tank, \$40,000. Contact Joe or John 919-938-2955 or joe@atlantidewatering.com. (P3M4)

JETTERS-TRAILER

New O'Brien Model 3518-SC jetting unit, trailer mounted unit, w/350 poly water tank, 4000 psi @ 18 gpm, 400' hose and attachments. In stock!!! (Stock #3024V) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (M2)

For Sale: Aries Saturn 3 Camera System with cable reel mounted in a Cargo Sport Trailer, with overhead AC system. For additional cost, will include transporter and camera. Unit has shore power or generator. For more information, contact Woody Willis @ 904-219-6491. (CMP3)

Pre-owned PipeHunter model 38T44 jetting unit, trailer mounted unit w/335 poly water tank, 4000 psi @ 25 gpm, 600' hose and attachments. In stock!!! (Stock #4313V) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (M2)

JETTERS-TRAILER

1999 O'Brien 3604 trailer jet. 600 gallons of water. 40 gpm @ 2000 psi. Root cutter kit and misc. nozzles. Continental gas engine. Call Jay Barnwell 1-315-437-1471. (C6)

Single axle trailer water jet, Kohler 18 hp gas motor, electric start. 100 gallon water tank, ten gallon gas tank, Cat pump, 4000 psi, 5.5 gpm. Perfect for 4-6" sewer lines or pressure washing equipment. Many extra options include sludge pump, high speed root cutter, different size jet tips, high speed wash down wand, etc. \$5,200. 781-844-1147. (CP3)

2 SECA trailer jets. Both have Myers 35 gpm, 2000 psi pumps. New paint on both. Located in Dallas. 972-938-1905. **www.empireequip.com.** (CPBM)

New PipeHunter Model 38T44 jetting unit, trailer mounted, w/335 Poly water tank, 4,000 psi @ 25 gpm, 600' of hose and attachments. **In stock!!!** (Stock #13317) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (M2)

Used USJ Jetting machines for sale. For new pictures and prices go to www.jetterdone.com or call 770-335-1371. (C2)

2000 SECA water jet. Front mounted, hose reel, Myers 50 gpm 3000 psi, 1500 gallon plastic water tank. Was a city owned unit. In excellent condition. 714-639-8352. **www.empireequip.com.** (CPBM)

2008 O'Brien 7040-SC trailer jet. 65 HP Cummins. 500' 3/4" hose. 700 gallon tanks. 40 gpm @ 2000 psi. Call Jay Barnwell 1-315-437-1471. (C4)

JETTERS-TRUCK

1986 CHEVY C-65 Cat. Diesel 175K, 5-speed manual split shift. New brakes and tires. Pump-Meyers D-65, 2000 lbs @ 65 GPM. One hour on rebuild. Perkins diesel. 1000 gallon tank. Good hoses and nozzles. Ready to work. \$15,000 (a steal). 770-527-0376. (CMPBM)

JETTERS-TRUCK

2006 GMC TC6500 cab & chassis truck mounted jetting unit w/Jet Eye camera system, 3000 psi @ 50 gpm, 1000 gallons water, 600' hose, 500 cfm blower, debris tank and attachments. In stock!!! RENT ME!! (Stock #13234) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (M2)

1992 SECA Jetter, 1500 gallon, diesel, Meyers 65 gpm pump, Ford F800 chassis, 210 hp diesel, 5 spd., air brakes, 35000 gvw, city owned. \$12,500. 800-969-1672. (C2)

1995 Harben, 925 hours, in excellent condition, mounted on 1998 Ford F800, 5.9 diesel hydromatic, 500 gallon water tank. Asking \$21,000. In Florida. Call 561-740-2010. Cell 396-4469. (CP3)

1990 Vactor Model 850 water jet on an International 4500, 65 gpm @ 2000 psi, 1500 gallon water tank. Good running condition. \$9,500. 714-639-8352 or craig@empirepipecleaning.com. (CPBM)

1999 International Sreco truck jet, 466 engine, John Deere deck motor, poly tank 2000 gallon, 65 @ 2000 pump, Beal pump. Set up for winter work. 500' of new Piranha jet hose, plus 500' extra hoses, nozzles and root cutter. Truck is in excellent condition. \$40,000 OBO. Call 309-853-5270. (C2)

JET VACS

1999 VacCon: International, automatic, 12-yard, FMC pump 80 gpm @ 2000 psi, 69,325 miles. \$65,000. Call John at 225-279-1487. (CM2)

2003 Vac-Con VPD4216LHA, mounted on Sterling 9501, 16 yard, 800' hose reel, 1500 gal. 85 gpm/3000 psi, hydrostatic blower, clean good running truck. \$149,800. Call 561-718-2736. (M2)

(1) 2002 Vactor 2110; (1) 2002 2115; (1) 2003 2110. **All PD units.** All were city owned units in excellent condition. Located in Dallas. 972-938-1905. **www.empireequip.com.** (CPBM)

JET VACS

1989 International Camel with 7248 hours, 12-yd. debris tank, extendable boom, 1500 gallon water capacity, Meyers pump, 80 gpm, 2000 psi, ex-municipality. Price \$39,000. Call 503-969-9557 or 503-682-2723. (C2)

1998 Vac-Con Model V350THA, 3-stage fan, 50 gpm, 3000 psi pump, 5-yd. debris tank, new white paint. Was city owned. 714-639-8352. **www.empireequip.com.** (CPBM)

1998 Vactor 2110 on a Freightliner FL80, 28,213 miles, 2-stage fan, 80 gpm, 2,000 psi pump off system accumulator. Was a city owned unit. Located in Dallas. 972-938-1905. **www.empireequip.com.** (CPBM)

MISCELLANEOUS

Top quality aerators at wholesale prices. We have replacement units for most name brands and also carry Linear Regenerative Rotary Vane pumps. Flagg Air, Gast, Thomas, FPZ, Secoh, Medo and more. Call a company that understands aerators and aeration systems. Septic Services Inc. 800-536-5564. (CPBM)

PADLOCKS

PADLOCKS: Your lock number, your key number, your quantity. Low prices. Quick shipments. Fast quotes. Master American. Wilson Bohannon. Catalog with prices. 800-461-0620. Lock-Masters USA Inc. (MBM)

PIPE REHABILITATION

Cues TV/Cutter Trailer: 2007 Evolution package, with or without camera, cutter or compressor. Call or go to our web site for photos and specs. **www.mccannsunnderground.com.** Financing available. Kelly 608-279-2299. (MBM)

Need plugs? Have seven 30"-60" flow through sewer plugs for sale. Brand new! Paid over \$6,500 US each. Make an offer! Kim 734-955-2508 x25. (C4)

POSITIONS AVAILABLE

Contractor seeking experienced employees to operate sewer cleaners, tv/grout/cutter, and Cured-in-Place Pipeline and Manhole equipment. Must have CDL, airbrakes, clean MVR and DOT. Most projects within 100 miles of St. Louis. Fax resume to 618-397-0098 or email: watinc.office@aol.com. (CM3)

POSITIONS WANTED

Liquid and solid waste management professional looking for stable employment. 17 years experience in septic, portable restrooms, and solid waste. Not afraid to get hands dirty. Call Mark at 620-202-0796. (P2)

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jettors. All available for daily, weekly, monthly, and yearly rentals. **VSI Rentals, LLC, (888) VAC-UNIT (822-8648) www.vsi-rentals.com.** (M2)

SERVICE/REPAIR

Sewer Cam Reel and Camera Repair: 48-hr. turn-around time. General Wire, Ratech, Electric Eel, Gator Cams. Quality service on all brands. For more info, give Jack a call. Dynamic Cable Repairs, Lodi, NJ 07644. 973-478-0893. (MBM)

SWEEPERS

2008 American La France Condor with a Vac/All Model VS10DC 3-in-1 machine (sweeper, catch basin, leaf collector), 350 water comp, 10-yd. debris body; vacuum system: 16,500 cfm belt drive with silencer, driven by Cummins turbo charged 6 cyl. diesel. In stock RENT ME!!! (Stock #1791) **www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).** (M2)

PLACE YOUR AD ONLINE AT www.mswmag.com - IT'S ALWAYS THERE TO MEET YOUR BUSY SCHEDULE

TV INSPECTION

TV INSPECTION BODIES, 3 available, **BRAND NEW**, dual compartment, heated/AC control rooms, LCD flat panel monitor, sound mixer, Panasonic VHS player with monitor, silent air compressor, Grundfos 12V water system, rear view camera, Karcher high pressure washer, motorized cable reel, GIS winch, multiple tool boxes, rear awning, refrigerator, and much more! Must sell, only 3 left, save thousands - **\$19,900 ea. or make a reasonable offer.** Bodies are in NH. Call 866-779-5438 or 603-491-8692 ask for Ron. (CM4)

TV INSPECTION

Partly new, partly refurbished Cyclops sewer TV van. Pan/tilt camera, crawler, 530' cable, 13" monitor, on-screen data, VCR. Mounted on Ford Aerostar mini van. Factory training available. Perfect for first timer. \$22,500. 830-249-9756. (CM2)

New Cyclops Sewer TV System mounted on raised roof Ford E-150 van. Pan & tilt camera, Crawler, 625 ft. cable, DVD, on-screen keyboard data. \$39,000. Call Bill 830-249-9756. (CM2)

TV INSPECTION

REBUILT INSPECTION CAMERAS: Gen Eye I, II, III. For more information call Jack at Dynamic Cable Repairs. 973-478-0893. (MBM)

Pads and Chain Assemblies: Silicon carbide filled for maximum traction and long life. Single and double hole pads for all makes of tractors. Money back guarantee. Contact **Pipe Tool Specialties** (503) 1-888-390-6794 or fax 1-888-390-6670. Samples sent upon request. Same day shipping. We are a 6/12 company. (CMBM)

WATERBLASTING

06 Jetstream Hydroblaster, 172 hrs., 10k, 15k, 20k. Hydraulic hose reel with 500' of 10K hose (new). Mounted in a custom 28' enclosed gooseneck. Long list of lances, nozzles, etc. \$96,750. 605-886-4225. (M3C4)

2005 NLB 40K 40201, excellent condition. \$75,000. Call for details. 330-270-9900 ext. 109. (P2C3)

2001 Vactor Vaxjet, closed loop surface cleaning system, 10,000 psi, 1000 gal. tank. Call for details. \$160,000 OBO. 330-270-9900 ext.109. (P2C3)

WATERBLASTING

Water jetting equipment. We rent, sell and repair water blasters. Visit us at: www.waterjettingequipment.com or phone 714-259-7700. (CPBM)

Sapphire nozzles for all major 40,000 psi waterblasters at wholesale prices! Same-day shipping. UHP replacement parts, hoses. waterjet@bell-south.net, 772-286-1218. (CBM)

It's **EASY** to submit your classified **ONLINE!**
Just go to: www.mswmag.com
Place a Classified Ad;
Fill in the Online Form!

MUNICIPAL SEWER & WATER Cleaner Pumper CLASSIFIED AD FORM PRO ONSITE installer

Please print ad legibly below with **correct punctuation** and **phone number**. Circle each word to be bolded, if any. (\$1.00 extra per word)

CHOOSE THE CATEGORY:

- | | | | | | |
|--|---|---|--|---|---|
| <input type="checkbox"/> Aerators | <input type="checkbox"/> Dredges | <input type="checkbox"/> Levels & Transits | <input type="checkbox"/> Positions Wanted | <input type="checkbox"/> Root Control | <input type="checkbox"/> Trailers-Vacuum/Tanker |
| <input type="checkbox"/> Blowers | <input type="checkbox"/> Excavating Attachments | <input type="checkbox"/> Locators | <input type="checkbox"/> Pressure Washers | <input type="checkbox"/> Safety Equipment | <input type="checkbox"/> Trucks (dump/septic/misc.) |
| <input type="checkbox"/> Bucket Machines | <input type="checkbox"/> Excavating Equipment | <input type="checkbox"/> Miscellaneous | <input type="checkbox"/> Pumps-Dredge | <input type="checkbox"/> Septic System Components | <input type="checkbox"/> TV Inspection |
| <input type="checkbox"/> Businesses | <input type="checkbox"/> Hand Tools | <input type="checkbox"/> Parts & Components | <input type="checkbox"/> Pumps-High Pressure | <input type="checkbox"/> Septic Tanks | <input type="checkbox"/> Vacuum Loaders |
| <input type="checkbox"/> Business Opportunities | <input type="checkbox"/> Hazardous Waste Units | <input type="checkbox"/> Pipeline Rehabilitation | <input type="checkbox"/> Pumps-Submersible | <input type="checkbox"/> Septic Trucks | <input type="checkbox"/> Vanes |
| <input type="checkbox"/> Cable Machines | <input type="checkbox"/> Hydroexcavation | <input type="checkbox"/> Portable Toilets | <input type="checkbox"/> Pumps-Vacuum | <input type="checkbox"/> Service/Repair | <input type="checkbox"/> Vehicle Tracking |
| <input type="checkbox"/> Computer Software | <input type="checkbox"/> Jetters-Trailer | <input type="checkbox"/> Portable Toilet Tanks | <input type="checkbox"/> Pumps - Washdown | <input type="checkbox"/> Slide-In Units | <input type="checkbox"/> Wanted |
| <input type="checkbox"/> Dewatering | <input type="checkbox"/> Jetters-Truck | <input type="checkbox"/> Portable Toilet Trailers | <input type="checkbox"/> Pumps-Water | <input type="checkbox"/> Sludge Applicators | <input type="checkbox"/> Wastewater Transfer |
| <input type="checkbox"/> Drainfield Restoration | <input type="checkbox"/> Jet Vacs | <input type="checkbox"/> Portable Toilet Trucks | <input type="checkbox"/> Rodding Machines | <input type="checkbox"/> Tanks | <input type="checkbox"/> Waterblasting |
| <input type="checkbox"/> Drain/Sewer Cleaning Equip. | <input type="checkbox"/> Lease Financing | <input type="checkbox"/> Positions Available | <input type="checkbox"/> Roll-Off Containers | <input type="checkbox"/> Tools | |

CHOOSE THE PUBLICATION(S):

- (Deadlines are for the month preceding issue)
- | | | |
|---|---|--|
| <input type="checkbox"/> CLEANER
Deadline: 1st of the Month | <input type="checkbox"/> PUMPER
Deadline: 10th of the Month | <input type="checkbox"/> PRO
Deadline: 17th of the Month |
| <input type="checkbox"/> MUNICIPAL SEWER & WATER
Deadline: 1st of the Month | <input type="checkbox"/> ONSITE INSTALLER
Deadline: 17th of the Month | |

CLASSIFIED AD RATE:

\$1.00 per word, per month, with a 20-word minimum or \$20.
[\$1.00 extra per bold word (key words only)]

ADVANCE PAYMENT REQUIRED:

No billing for classified ads. Payment must be received in advance before publishing.

CALCULATE THE AMOUNT DUE:

_____ words X \$1.00 = _____ X _____ Publications X _____ Months = \$ _____
((\$20 minimum) # of publications checked above # of months to run the ad **Total Amount Due**)

(Example: 25-wd. ad x \$1.00 per word = \$25.00;
\$25.00 x 2 publications [Pumper & Pro] = \$50.00;
\$50.00 x 2 months to run the ad = \$100.00 Total)

FILL IN COMPANY AND PAYMENT INFO:

COMPANY NAME: _____
ADDRESS: _____ PHONE: _____
CITY: _____ STATE: _____ ZIP: _____

MAIL this completed form with payment to:
COLE Publishing Inc., PO Box 220, Three Lakes, WI 54562

FAX this completed form to: **715-546-3786**

ONLINE forms at: www.cleaner.com
www.pumper.com
www.promonthly.com
www.onsiteinstaller.com
www.mswmag.com

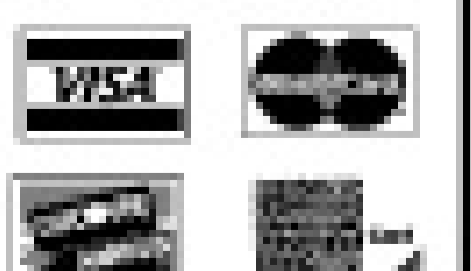
QUESTIONS: CALL 1-800-257-7222

PLEASE FILL OUT CREDIT CARD INFORMATION COMPLETELY INCLUDING V-CODE (3-DIGIT NUMBER FOUND BY YOUR SIGNATURE)

CREDIT CARD NO.: _____ V-CODE: _____ EXP. DATE: _____

CARDHOLDER NAME: _____ PHONE: _____

WE ACCEPT:



Marketplace Advertising

CONFINED SPACE ENTRY PACKAGE
ONLY \$2,995

The best package on the market includes:

- 4-Gas Air Monitor (3 Year Sensor Warranty)
- 7' Tripod
- 3-Way Fall Protection
- Work Winch
- Full Body Harness

Booth 138

Add a Blower with 15' of duct for only \$300!
Add a 5 Minute Escape Respirator for only \$500.

Ask About Our

- Harben Jettors
- GapVax Combination Trucks
- Vac Replacement Parts
- Camera Systems
- Nozzles & Hoses
- Blowers & Ventilators
- Magnetic Lid Lifters
- Aluminum Folding Ladders
- Repairs & Service

MTECH 800.362.0240
www.mtechcompany.com

Compact Saddle Tap!
3/4" to 2" Tapping Capacity

- Compact and Lightweight: Only 7 1/2 lbs!
- Uses High Alloy, Non-Corrosive Components.
- Independent Feed and Rotation.
- Taps CI/DI, PE and PVC Pipe.

New Year Factory Direct Specials!
Call for details.

LIFETIME Warranty!

For Details on Specials Call 1-888-737-3668
For Full Product Line Visit www.footagetools.com

Footage TOOLS U.S.A. Booth 78

DYE TRACERS

Solutions for:

- Infiltration
- Septic Systems
- Cross Connection
- Leaks and more...

BRIGHT DYES
Division of Regeste Chemicals

www.brightdyes.com • FAX: 937-886-9300

Booth 3053

FREE SAMPLE 1-800-394-0678

\$2,999
Confined Space Entry System

Booth 176

- 7' Tripod
- 3-Way Fall Winch
- Work Winch
- Full Body Harness
- MSA Altair 4 Gas Monitor

Call for Catalog & Prices
Cloverleaf TOOL CO. 800.365.6583
www.cloverleaftool.com

TLIFT

INVENTED BY THE WORKER FOR THE WORKER.

Booth 3213

Visit www.tlifts.com

Industrial Diversified Products, Inc.
P: 251-626-9143 | F: 251-625-8873
E-mail: sales@tlifts.com

www.tlifts.com

Simple Solutions DISTRIBUTING LLC
MAKERS OF **Wolverine Brand™**
ODOR CONTROL PRODUCTS

Booth 49

Wolverine Brand Vent Filters
Stop The Stink-GUARANTEED!

In New Jersey 973-846-7817
Outside New Jersey 866-667-8465

www.IndustrialOdorControl.com
www.StopSepticOdor.com

PayPal

DYNAMIC CABLE REPAIR

We Repair:
Gen-Eye I, II, III, Insight Vision,
Electric Eel, GatorCams, Ratech,
Vision Intruders,
Inspection Cameras, Locators,
Command Modules and Cables

48-Hr. Turn Around Time

INSPECTION CAMERAS ARE OUR ONLY BUSINESS!

973-478-0893

DYNAMIC REPAIRS
40 Arnot St., Unit 20 • Lodi, NJ 07644
www.dynamicrepairs.net

29th Annual

PUMPER & CLEANER ENVIRONMENTAL EXPO INTERNATIONAL

February 25-28, 2009

Kentucky Exposition Center
For More Info Call 800 257 7222
or go to www.pumpershow.com

Marketplace advertising

Municipal Sewer & Water Marketplace gives you nationwide exposure to thousands of industry professionals.

Layout and design is included **FREE**, and we can fax or e-mail you a proof for final approval!

Now Available In 4-Color

Choose a size that works best for you!

Call **1.800.994.7990**

Size A: \$319 ^{00*} 1.875" W x 4.875" H This size is great for two photos!	Size B: \$219 ^{00*} 1.875" W x 3.2" H Perfect size for one photo!	Size C: \$119 ^{00*} 1.875" W x 1.5" H A great value!
---	--	---

*Black and white prices, call for 4-color pricing.

Send ad materials and payment to:
COLE PUBLISHING INC.
P.O. BOX 220 • THREE LAKES, WI 54562

CHANGING A CULTURE

A renewed emphasis on safety helps a South Carolina water and sewer authority achieve dramatic improvements in performance

By Ken Wysocky

Changing the culture of an organization can be like trying to turn an aircraft carrier: It takes a long time, and progress may be hard to see at times. But once the change gains momentum, smoother sailing lies ahead.

That was the experience at the Beaufort-Jasper Water and Sewer Authority in South Carolina, which renewed its emphasis on safety and significantly reduced injuries, equipment damage and workers' compensation costs. The turnaround was so dramatic that for 2007 the agency earned an industry-pace setter Gold Award from the Association of American Water Agencies. It was one of only six water utilities honored.

Many lapses

"Seven years ago, we were paying 86 percent more than the industry average in workers' compensation insurance premiums," says Ken Jordan, safety and risk manager. "That means we were paying hundreds of thousands of dollars more in premiums.

"In addition, our employees were getting hurt at double the average rate for the water and wastewater industry. We suffered from a general disregard for safety. There was not a lot of emphasis on safety, which in turn led to employee morale problems. Employees felt

that if management didn't care, why should they?"

The safety lapses ranged from chemical spills to failure to follow proper procedures for confined-space entry. Today, the organization pays almost 30 percent less than the industry average in workers' compensation premiums. And last summer, the 180 employees went 1 million hours without a lost-time injury.

"Safety used to have a negative connotation, but we've changed our culture to the point that safety is a value we hold dear," Jordan notes. "There's been a real cultural shift; now safety is just how we do business around here."

Starting from scratch

One of the first things Jordan did when he was hired in 2001 was perform a hazard analysis for the various job classifications within the agency. Then he examined accident reports to detect injury trends and patterns. "We had to get a handle on where and how people were getting hurt," he says. "Then we needed to establish a safety program that sets employees up for success with proper procedures, training and equipment. We went from reactive to proactive."

The process was difficult. Looking back, Jordan compares it to peeling back an onion, because the cause of an injury was never as

simple as, say, a maintenance employee making contact with a live circuit. The more complex answer might revolve around why the employee didn't wear insulated gloves or follow safety procedures.

"It was a systematic management issue — a lack of commitment to safety" in terms of equipment, training and procedures, Jordan says. Moreover, the agency wasn't following up on recommendations for preventing accidents from recurring. "It doesn't do any good if recommendations come out of an accident report, but no corrections are made," he says. "Employees

"We instituted a Take Two for Safety program that essentially tells employees to let the sewage run down the road and let the customer be without water until they are sure the job can be done safely. In other words, take two minutes to plan the job before you rush in and get hurt."

Ken Jordan

buy into it when they see corrective action, which builds credibility, loyalty and pride."

Jordan's initial groundwork revealed that many injuries occurred when employees put speed ahead of safety. "Years ago, the priority was the customer without water or the sewage on the ground, so employees would rush in and get hurt," he says. "We instituted a

We invite readers to offer ideas for this regular column, designed to help municipal and utility managers deal with day-to-day people issues like motivation, team building, recognition and interpersonal relationships. Feel free to share your secrets for building and maintaining a cohesive, productive team. Or ask a question about a specific issue on which you would like advice. Call editor Ted Rulseh at 800/257-7222, or e-mail editor@mswmag.com.

Take Two for Safety program that essentially tells employees to let the sewage run down the road and let the customer be without water until they are sure the job can be done safely. In other words, take two minutes to plan the job before you rush in and get hurt. It's now a huge part of our program."

Management support

The improved safety record hinged directly on support from top management. "You've got to have structure, resources and a commitment from top management," Jordan says. "I can't say

enough about our management leadership here."

To underscore the commitment, leaders wrote safety accountability into general managers' and managers' job performance goals and linked their annual salary increases to their results. "You can't motivate everyone by just saying that safety is good for you," Jordan says. "If it affects peoples'

paychecks, you motivate them in a different way.”

Beyond that, management held employees accountable. In some instances, management fired or demoted some employees who refused to buy into the program. Effective promotion also helped. For instance, all employees must attend monthly safety training sessions on topics like fall protection, CPR training, confined-space entry and back injury prevention.

Each department holds weekly meetings to discuss safety issues. “By taking different tacks, 99 percent of our employees bought into the program,” Jordan says.

The last key program component was recognition of safety achievements, companywide and personally. At the end of the fiscal

year in June, the agency holds a safety celebration where critical safety information and data is shared with employees. After the meeting, employees get the rest of the day off.

On a personal level, employees in the field get a \$20 retail gift card for every quarter they go without an injury. Administrative employees, who are vulnerable to ergonomic-related injuries, receive a \$10 gift card. Employees can donate the gift card amount to the local United Way if they wish.

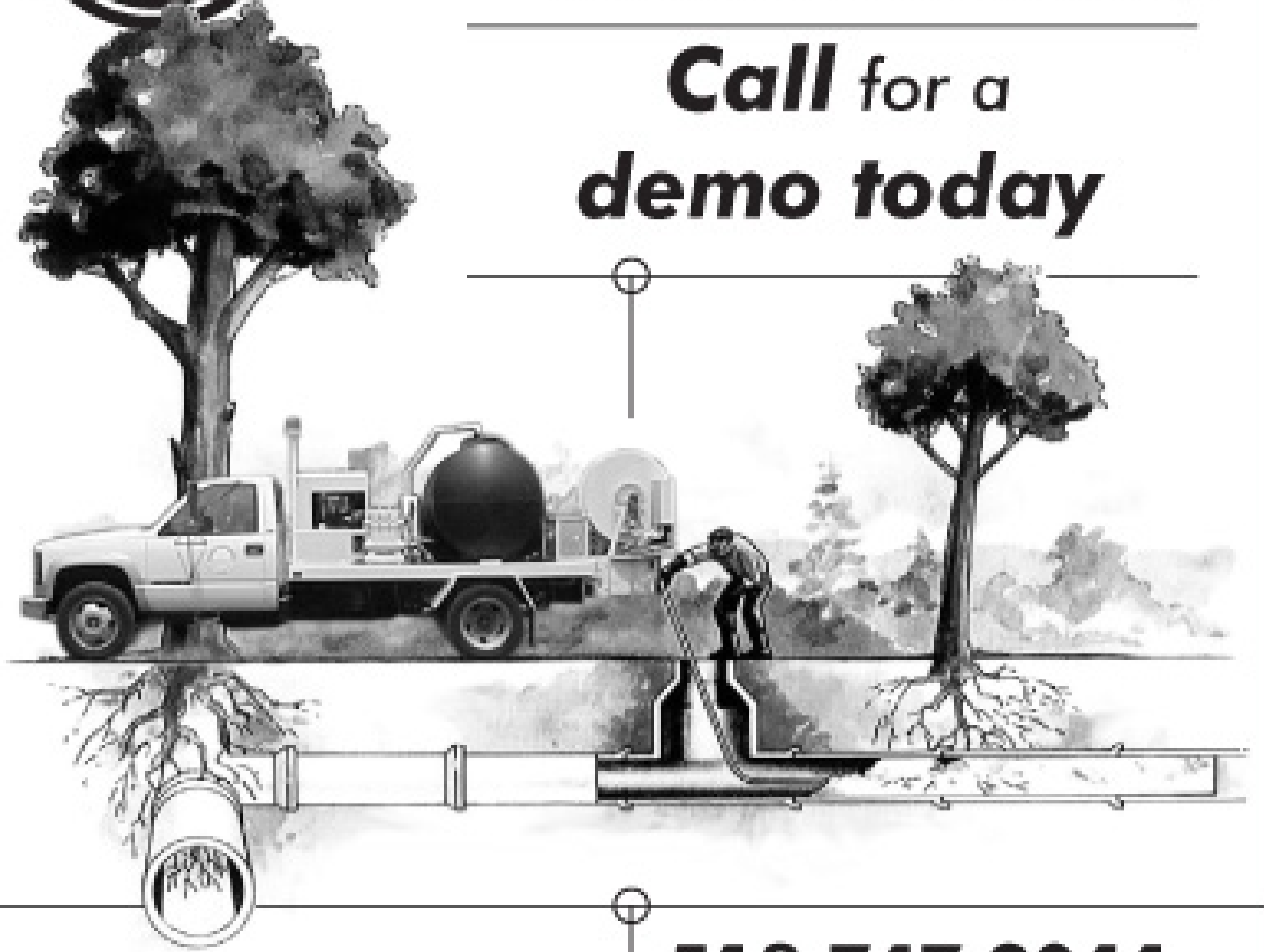
Agency employees are now working toward 2 million hours without a lost-time injury. That goal should be easier to reach than the first million hours, now that the agency has that long, slow, 180-degree turn behind it. ♦



Vaporooter

We Put the Control in Root Control

**Call for a
demo today**



MUNICIPAL SALES
A Root & Grease
Control Company

231

518.747.2044

fax: 518.747.5490

mark@municipalsales.net

www.municipalsales.net

MSW Magazine - Inspection, Rehabilitation, Relining, Installation and Maintenance of Water, Sewer and Stormwater Pipes
<http://www.mswmag.com/>

WWW.ONSITEINSTALLER.COM | WWW.PROMONTHLY.COM | WWW.CLEANER.COM | WWW.MSWMAG.COM | WWW.PUMPERTRADER.COM | WWW.PUMPERSHOW.COM



SUBSCRIBE

EDITORIAL

CLASSIFIEDS

VIDEO

ADVERTISING

Looking to **BUY** or **SELL**?
Just Submit Your Classified Ad **ONLINE!**

**Only
\$1.00
PER WORD
(\$20 Min.)**

Your ad will be posted
on the
MSW Web site
within two to three
business days after
received.

**It's
&
Easy
Secure!**

Just go to www.mswmag.com; click on “Classifieds;”
click on “Place a Classified Ad;” fill in the online form.



Sewer History Exhibit

A traveling exhibit on the history of sewage conveyance systems from 3500 B.C. through the 1930s is part of Utility Construction EXPO '09 on March 4-6 at the Phoenix (Ariz.) Convention Center Exhibit Hall. The photos and artifacts of Jon Schladweiler, historian of the Arizona Water & Pollution Control Association, offer insight into the origins of modern sewer systems and bring to light the contributions of sewer builders, engineers and operators. Visit www.sewerhistory.org.

Cooperative Effort

The Kansas Water Environment Association reports that the Mutual Aid Program for utilities is finalized. It coordinates assistance between neighboring utilities in large-scale emergencies such as tornadoes, floods and ice storms. The program also supports statewide emergency preparedness and disaster response. Visit www.ksmep.org.

Klotz President of ASCE

The American Society of Civil Engineers elected D. Wayne Klotz, P.E., D.WRE., F.ASCE, president at its annual meeting. He is president of Klotz Associates Inc., a civil engineering firm in Houston, Texas. Other 2009 officers include:

- Blaine D. Leonard, President-Elect
- N. Catherine Bazan-Arias, At-Large Director-Elect
- Anthony M. Puntin, Region 1 Director-Elect
- Norma Jean Mattei, Region 5 Director-Elect
- Charles R. Spinks, Region 9 Director-Elect
- Ronald E. Smith, Technical Region Director-Elect

Global Standardization of Toilets

During the November 2008 World Toilet Summit, the World Toilet Organization (WTO) and International Code Council signed a memorandum of understanding to introduce initiatives that promote global codes for the design and construction of toilets. The WTO, a network of 151 member organizations from 53 countries, is supporting leading health officials who advocate replacing flush toilets with dry toilets that separate urine from feces without using water.

AWWA Debuts Streamlines

Streamlines, a new biweekly electronic newsletter from the American Water Works Association, merges *E-MainStream* and *WaterWeek*. Seventy percent of readers surveyed asked for a single, brief e-newsletter and more consolidation of e-mail communications from AWWA. Members also requested more information on water resources, regulatory compliance, trends and utility news. *Streamlines* is e-mailed to members and posted at www.awwa.org.

EPA Progress Report

The U.S. EPA posted its FY 2008 Performance and Accountability Report describing the agency's environmental and financial progress over the past year. The report highlights the EPA's efforts to reduce air pollution, improve water quality, clean up Superfund sites, increase health and environmental safety through pesticide and chemical evaluation, and avoid pollution through strong enforcement actions. View the report at www.epa.gov/ocfo/par/2008par/index.htm.

Angelo Chairs Committee

Dave Angelo, vice president and general manager of Fairbanks Morse Pump (Kansas City, Kan.), was named chairman of the Water & Wastewater Equipment Manufacturers Association Inc. Members new to the board of directors include Tammy Bernier of Duperon Corp., James Board of Weir Specialty Pumps, and Anthony Picozzi of MIOX Corp.

CALENDAR

Feb. 5-6

Ohio Water Quality & Waste Management Conference, Holiday Inn on Lane, Columbus. Call Dr. Karen Mandl at 614/292-4505 or visit <http://setll.osu.edu>.

Feb. 12-13

American Water Works Association Research Symposium: Emerging Organic Contaminants, Austin, Texas. Call Linda Moody at 303/347-6201 or visit www.awwa.org.

Feb. 17-20

American Water Works Association/Water Environment Federation Utility Management Conference, Hotel Monteleone, New Orleans, La. Call Linda Moody at 303/347-6201 or visit www.awwa.org.

Feb. 25-28

Pumper & Cleaner Environmental Expo International, Kentucky Exposition Center, Louisville, Ky. Call 800/257-7222 or visit www.pumpershow.com.

March 1-4

American Water Works Association Customer Service and Information Technology Conference, Westin Hotel, Charlotte, N.C. Call 800/926-7337 or visit www.awwa.org.

March 4-6

Utility Construction Heavy Equipment Expo, Phoenix (Ariz.) Convention Center. Call 703/358-9300 or visit www.nuca.com.

LEARNING OPPORTUNITIES

EPA Draft Handbook

The U.S. EPA Office of Wetlands, Oceans and Watersheds and Office of Wastewater Management have issued a draft *TMDLs to Stormwater Handbook*. It is available for public comment at: www.epa.gov/owow/tmdl/stormwater/#tmdlresources. Contact Christine Ruf at 202/566-1220 or e-mail Ruf.Christine@epa.gov for more information.

University of Wisconsin-Madison Courses

The University of Wisconsin-Madison Department of Engineering Professional Development is offering these CEU, LU, PDH classes at the Madison campus unless indicated otherwise:

- March 30-April 3 – Cross-Connection Control and Backflow Prevention (J830)
- April 2-3 – Drainage Engineering Fundamentals for Non-Engineers (K347), Las Vegas, Nev.
- April 20-21 – Mastering the Fundamentals of Culvert Hydraulic Design (J966)
- April 22-23 – Implementing Effective Culvert Maintenance (J967)
- April 27-28 – Pumping Equipment and Systems: Selecting, Operating, Maintaining and Troubleshooting (K273)
- April 29-30 – Fleet Management (K326).

Call 608/262-2061 or visit <http://epdweb.engr.wisc.edu>.

American Public Works Association

APWA has these courses as Web-based broadcasts:

- March 12 – Mobile Technology for Public Works Use
 - March 26 – How to Initiate and Implement a Right-of-Way Program
 - April 9 – Continuity of Operations – How to Stay on Top.
- Call Carrie Merker at 816/472-6100, ext. 5213, or visit www.apwa.net. ♦

Municipal Sewer & Water invites your national, state or local association to post notices and news items in this column. Send contributions to editor@mswmag.com.



2009 New 20 Yard De-Cant Tainer Dewatering Filter Box: Designed for hi-dump vacuum trucks, sealed tail gate w/heavy duty center door latch, complete roll-over tarp system w/wind guard. Call for more info.

863-956-0315

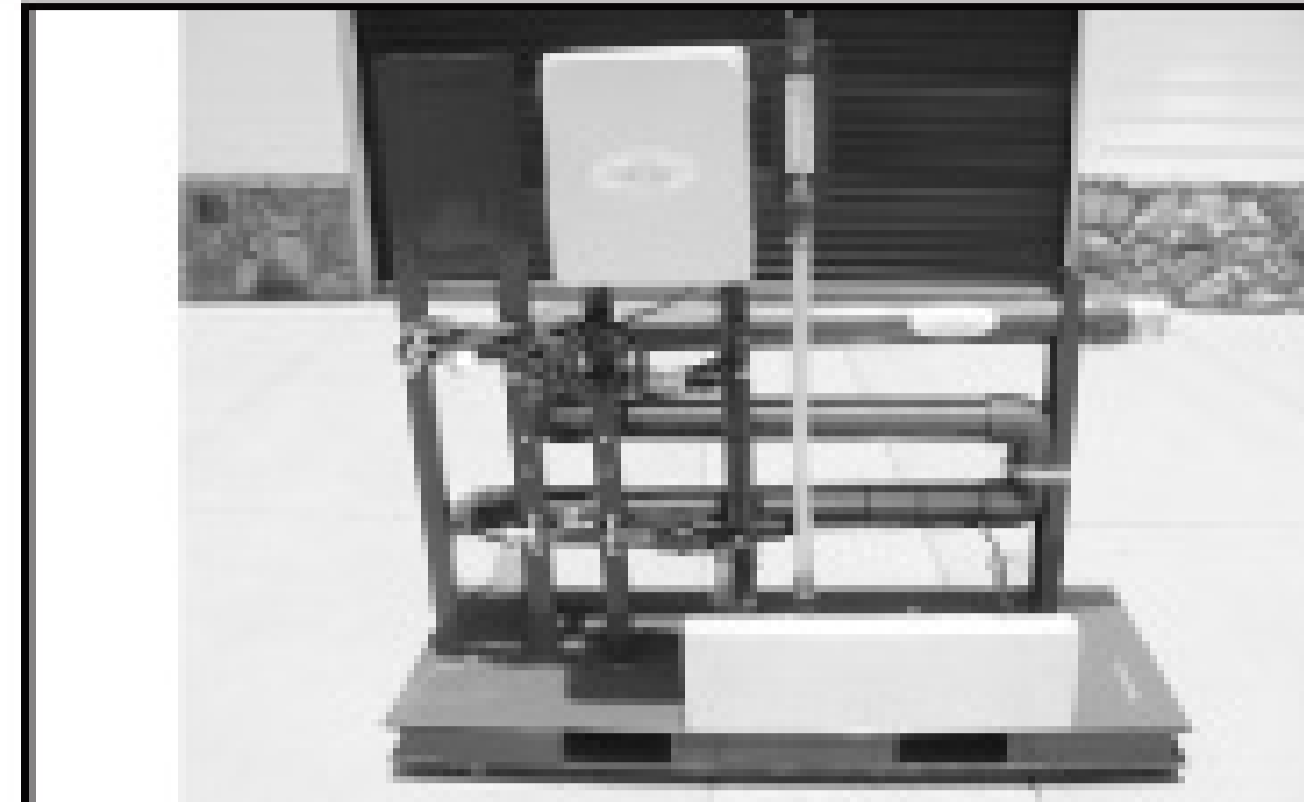
CMP2



2009 New Dewatering Filter Boxes: Containers are sandblasted, epoxy primed and coated inside & out, exterior painted w/polyurethane top coat, 1-4" fill port, 6-3" drain ports, 2-6" wash-out ports, seal tail gate, complete roll-over tarp system w/wind guard. Call for pricing.

863-956-0315

CMP2



Polymer Mixer: Polymer blend system unit with polymer injector mixer, variable flow control, flow valve, 3" piping and control panel, skid mounted. Units available with 500 gallon poly tank also, one piece or two. Call for details.

863-956-0315

CMP2



Belt Press Semi Trailer Mounted: 2.0 meter press capable of producing cake sludge of 24% or more and up to 300 gpm, reversible load conveyors, twin polymer tanks w/mixers, polymer blend system, A/C control room w/complete cabinets. Unit is in show condition.\$165,000

863-956-0315

CMP2



2009 New Polymer Mixer Tank: 500 gallon vertical poly tank with mixer, skid mounted. Call for more info.

863-956-0315

CMP2



2009 New 35 Yard De-Cant Tainer Dewatering Filter Box: Interior epoxy coated, exterior painted w/polyurethane top coat, seal tail gate, complete roll-over tarp system with fiberglass, aluminum or quick release bows. Call for details and pricing.

863-956-0315

CMP2



1996 Ford L-8000, Vac-Con V-350: 8.3 Cummins 275 hp, John Deere diesel upper, 600' 1" hose, telescopic boom, 3-stage blower, well maintained municipal truck.....\$39,900

814-696-4343 - Hollidaysburg, PA

CMP2



3 Brand New TV Inspection Bodies: Heated/AC, flat panel monitor, sound mixer, VHS player w/monitor, air compressor, 12V water system, pressure washer, cable reel, winch, tool boxes, refrigerator, more!\$19,900 OBO

866-779-5438 or 603-491-8692

CM4

PLACE YOUR AD ONLINE AT www.mswmag.com or fill out this form

Cleaner
Pumper/Pumper Trader

TRUCK STOP

Advertising

BE ONLINE & IN CLEANER, PUMPER/Pumper Trader
or MUNICIPAL SEWER & WATER FOR ONLY \$125!

Please print ad legibly with correct punctuation and PHONE NUMBER. Don't forget to send photo!

RATE \$125 PER AD, PER MONTH, PER PUBLICATION WITH A 30 WORD MAXIMUM - PLEASE NOTE: You can only advertise ONE TRUCK for sale per ad.

DEADLINES MSW: 1ST OF THE MONTH • CLEANER: 1ST OF THE MONTH • PUMPER: 10TH OF THE MONTH - For example: July 1st would be the deadline for August MSW.

ADVANCE PAYMENT NO BILLING FOR TRUCK STOP ADS. Payment must be received in ADVANCE before publishing in Cleaner, Pumper or MSW.

Enclosed is \$ _____ for _____ ad(s) to run _____ month(s) in

CLEANER MSW PUMPER/Pumper Trader ALL 3 PUBLICATIONS (Triple dollar amount)

Company Name _____

Address _____ Phone _____

City _____ State _____ Zip _____

• **MAIL** this completed form with payment and photo to:
COLE Publishing Inc., P.O. Box 220, Three Lakes, WI 54562
(Make check/money order payable to: COLE Publishing Inc.)

• **ONLINE** ad form at: www.pumper.com, www.pumpertrader.com,
www.mswmag.com, www.cleaner.com

• **FAX** this completed form to: 715.546.3786 and **E-MAIL** photo to:
truckstop@pumper.com, truckstop@cleaner.com, truckstop@mswmag.com

PLEASE FILL OUT CREDIT
CARD INFORMATION
COMPLETELY:

CREDIT CARD NO. _____

V-CODE _____

EXP. DATE _____

CARDHOLDER NAME _____

PHONE _____





Booth 134

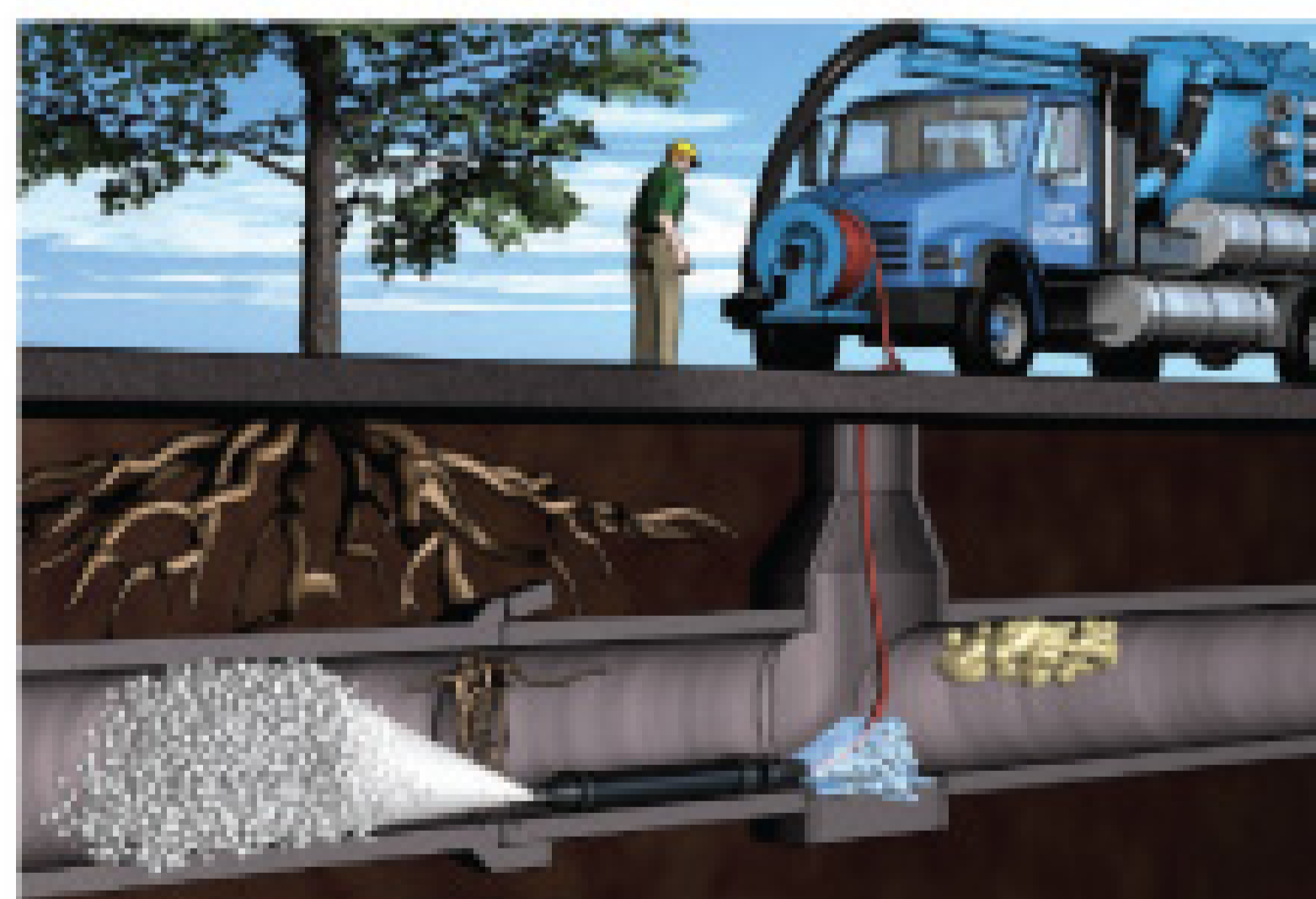
The SOS for SSOs.....



Stop Costly SSOs Today, with RootX

Waiting for service can be costly. You can save time and money by utilizing RootX products as part of your current maintenance program.

Don't put your city, municipal district or customer at risk of more SSOs! As a City sewer dept. or municipal contractor, you already have the equipment you need to tackle common causes of SSOs: blocked sewer lines resulting from accumulated fats, roots, oils and grease (F.R.O.G.). You just need the right tools to turn your equipment into SSO Busters!



RootX turns your equipment into a root killing machine without negative impacts to the treatment plant or the surrounding environment.

Registered with the EPA to kill roots in Sanitary and Storm sewers (EPA Registration #68464), RootX can be applied with your sewer cleaning equipment or direct from the package. You can attack roots with a targeted foam spray from the RootX applicator or simply fill the pipe with a root killing foam. RootX packaging allows a city or contractor to treat both mainline sewers and residential service laterals for a complete root control program.

Grease-X enables you to eliminate blockages caused by fats, oils and grease. (F.O.G.)

Apply Grease-X Jet with your jetter in conjunction with your regular cleaning program to maintain grease free lines. Use the cleanest method of F.O.G. removal available with Grease-X Biozyme, microbes that digest grease and leave water and CO2 behind. Grease-X can also help keep lift stations free of the debilitating build up of F.O.G.



**Fax info to 503-485-5229 for brochure
www.rootx.com • PH: 1-800-844-4974**

Name _____

Company _____

Street _____

City _____ State _____ Zip _____

Phone (____) _____ Fax (____) _____

E-Mail _____

7

www.rootx.com

800-844-4974

Less Noise

Vac-Con's larger capacity hydrostatic pumps allow the system to perform at a much lower RPM which means quieter operation, a healthy benefit for operators and community residents around the world.



Less Exhaust

Because of the efficiency of our hydrostatic drive systems, Vac-Con machines use less fuel, which means lower cost...and less exhaust.

Less Fuel

Vac-Con's exclusive 3-Stage Centrifugal Compressor operates at a performance level that loads material faster than the competition. This equals Less Time on the job which means Less Fuel is used.

Less Water

Vac-Con's available high pressure/low volume water systems conserve water.

We Were "Green" Before It Was Even Called "Green"

VAC-CON MACHINES HAVE BEEN "GREEN" FOR MORE THAN 20 YEARS.

Vac-Con is proud to be a leader in the worldwide environmental industry.

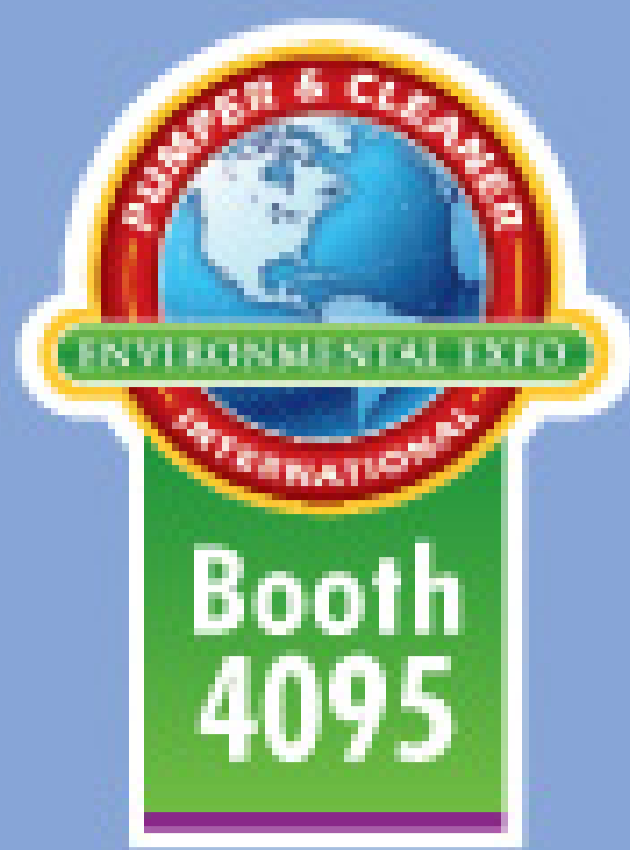
We have been manufacturing products that assist public and private entities in maintaining water collection systems and treatment facilities for more than two decades. We can all help assure that the world's potable water supplies are preserved for future generations simply by not wasting or polluting this precious resource. *Think high pressure/low volume!*

VAC-CON MACHINES – LEADING THE INDUSTRY IN "GREEN" INITIATIVES.



A HOLDEN INDUSTRIES Company

www.vac-con.com



The **WaMax** milling system is used for the removal of roots, mineral deposits, concrete, protruding taps, and for the preparation of relining work. These different applications are possible by the use of various guiding-cages and milling heads. The WaMax System works in pipe diameters of 3" to 40".



WaMax

The **Mega 6** Floor Cleaning Nozzle uses weight and jet angle to create a "water shovel". The jet pattern provides maximum removal of debris in lines up to 100".



Mega 6

The **Smart Cutter** clears problems your nozzle can not, gives you a lifetime warranty against rust, and a kit that covers pipes from 4" to 15".



Smart Cutter

The **RotoJet** large diameter pipe rotation nozzle is independently driven, delivers a rotation rate between 50 & 300rpm, and cleans pipe walls 12" to 120".

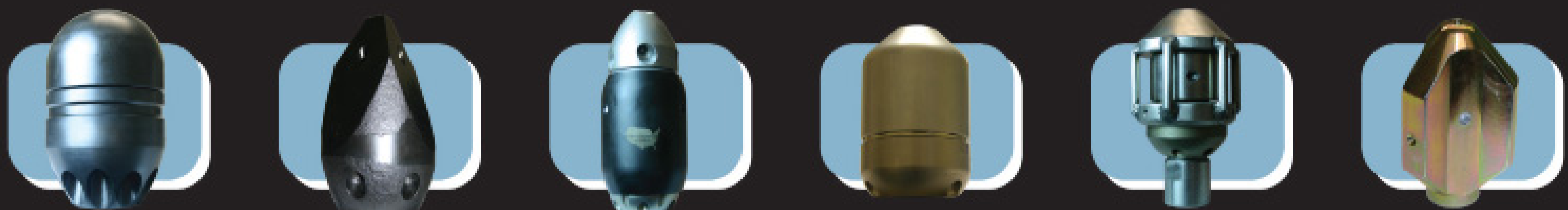


Roto Jet

The **K114** large pipe chain cutter is designed to handle your biggest root cutting problems. The K114 covers pipe diameters from 18" to 40".



K114



For Sales and Rental information contact your local Smart Nozzle Distributor or Call Sewer Equipment Company of America at 800.323.1604.