

ON SITE installer™

PROMOTING WASTEWATER TREATMENT QUALITY AND PROFESSIONAL EXCELLENCE www.onsiteinstaller.com

**Bedrock, water pose
site challenges**
Page 22

**Don't forget to
fix the landscape**
Page 26

**Bring luster to
machine finishes**
Page 28



THE PROBLEM *Solvers*

Canada's OSI set itself up as the champion of the tough job, finding ways to install effective systems on sites with marginal soil conditions
PAGE 12

VORACIOUS

With its unique patented V-Slice® cutter technology, the Omnivore® literally devastates anything unfortunate enough to enter into its vicious vortex.



Liberty Pumps®

800-543-2550
www.libertypumps.com



U.S. Patent No. 7159806



INFILTRATOR®
systems inc.

COMING SOON!

**Potable Tank
Series**

strength runs in the family

IM-1060



IM-540



IM-1530



NEW!
IM-1530
1509 GALLON
WORKING CAPACITY

**Redefining
High Speed**

- Strong injection molded polypropylene construction
- Structurally reinforced access ports eliminate distortion during installation and pump-outs
- Reinforced structural ribbing and fiberglass bulkheads offer additional strength
- Integral heavy-duty green lids that interconnect with Infiltrator's TW Riser system
- Can be pumped dry during pump-outs



CSA designation
for B66-10

contents

March 2014



ONSITE
installer

Published monthly by

COLEpublishing

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



Call toll free 800-257-7222;
outside of U.S. or Canada call 715-546-3346
7:30 a.m.-5 p.m. Central time, Mon.-Fri.

Website: www.onsiteinstaller.com

Email: info@onsiteinstaller.com • Fax: 715-546-3786

SUBSCRIPTIONS

A one year (12 issue) subscription to *Onsite Installer*™ in the United States or Canada is free to qualified subscribers. A qualified subscriber is any individual or company in the United States or Canada that partakes in the installation, design, maintenance, manufacture, treatment, consulting or sale of onsite wastewater treatment systems or supplies. 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 subscribe please visit onsiteinstaller.com or send company name, mailing address, phone number and check or money order (U.S. funds payable to COLE Publishing Inc.) to the address above. MasterCard, VISA and Discover are also accepted. Supply credit card information with your subscription order.

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

CLASSIFIED ADVERTISING

Minimum rate of \$25 for 20 words; \$1 per each additional word. 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. Fax to 715-546-3786 only if charging to MasterCard, VISA, Discover or AmEx. Include all credit card information and your phone number (with area code). Mail with check payable to COLE Publishing Inc. to the address above. CLASSIFIED ADVERTISING APPEARS NATIONWIDE AND ON THE INTERNET. Not responsible for errors beyond first insertion.

DISPLAY ADVERTISING

Contact Winnie May at 800-994-7990. Publisher reserves the right to reject advertising which in its opinion is misleading, unfair or incompatible with the character of the publication.



Winnie May

EDITORIAL CORRESPONDENCE

Send to Editor, *Onsite Installer*, P.O. Box 220, Three Lakes, WI, 54562 or email editor@onsiteinstaller.com.

REPRINTS AND BACK ISSUES

Visit www.onsiteinstaller.com for options and pricing. To order reprints, call Jeff Lane at 800-257-7222 (715-546-3346) or email jeffl@colepublishing.com. To order back issues, call Nicole at 800-257-7222 (715-546-3346) or email nicolel@colepublishing.com.

CIRCULATION

Circulation averages 21,954 copies per month. This figure includes both U.S. and International distribution.

© Copyright 2014 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



**WATER & WASTEWATER
EQUIPMENT, TREATMENT &
TRANSPORT SHOW**

www.pumpershow.com

Education Day: Feb. 23, 2015 Exhibits Open: Feb. 24 - 26, 2015
Indiana Convention Center, Indianapolis, Indiana

12

The Problem Solvers *By Gil Longwell*

ON THE COVER: In British Columbia, Can., the crew at Onsite Systems Inc. takes pride in tackling the tough jobs in system design, management and maintenance. On the cover, (from left) senior planner Shaun Pattenden, managing technician Trefor Digby and manager Ryan Parker pause while working on another challenging project. (Photo by Abigail Saxton Fisher)

8

Editor's Notebook: Think Spring

With the economy on the upswing and property developers back at work in many regions, are you geared up for a busy year?

By Jim Kneisz

10

@onsiteinstaller.com

Be sure to check out our exclusive online content

18

State of the States: Getting Started

Wastewater trade association takes off in Arkansas to represent pumpers and installers on new regulations.

By Doug Day

20

Pumps Directory

22

System Profile: Getting It Right

A failed system, an adventurous homeowner and new technology create the opportunity for a better onsite solution in Illinois.

By David Steinkraus

26

Basic Training: Landscaping is Critical

As installers, you're most concerned about what goes underground. But the customers you have to satisfy might be focused more on aesthetics.

By Jim Anderson, Ph.D., and David Gustafson, P.E.

28

Machine Matters: Hey, Good Lookin'

With advances in the quality of truck and machine finishes, what's the best way to protect your equipment investment from a harsh working environment?

By Ed Wodalski

30

Rules and Regs:

Onsite design and installation updates a long time coming in rural Ohio

By Doug Day and Sharon Verbeten

32

Notes From NOWRA:

Onsite system design standards improve treatment performance nationwide

By Bob Mayer

33

Industry News

34

Associations List

36

Product Focus: Pumps

By Craig Mandli

38

Product News

Coming Next Month: April 2014

ISSUE FOCUS: Advanced Treatment Units

- State of the State: Joining forces in Wisconsin
- Basic Training: Choosing ground cover

Get Social with *Onsite Installer*

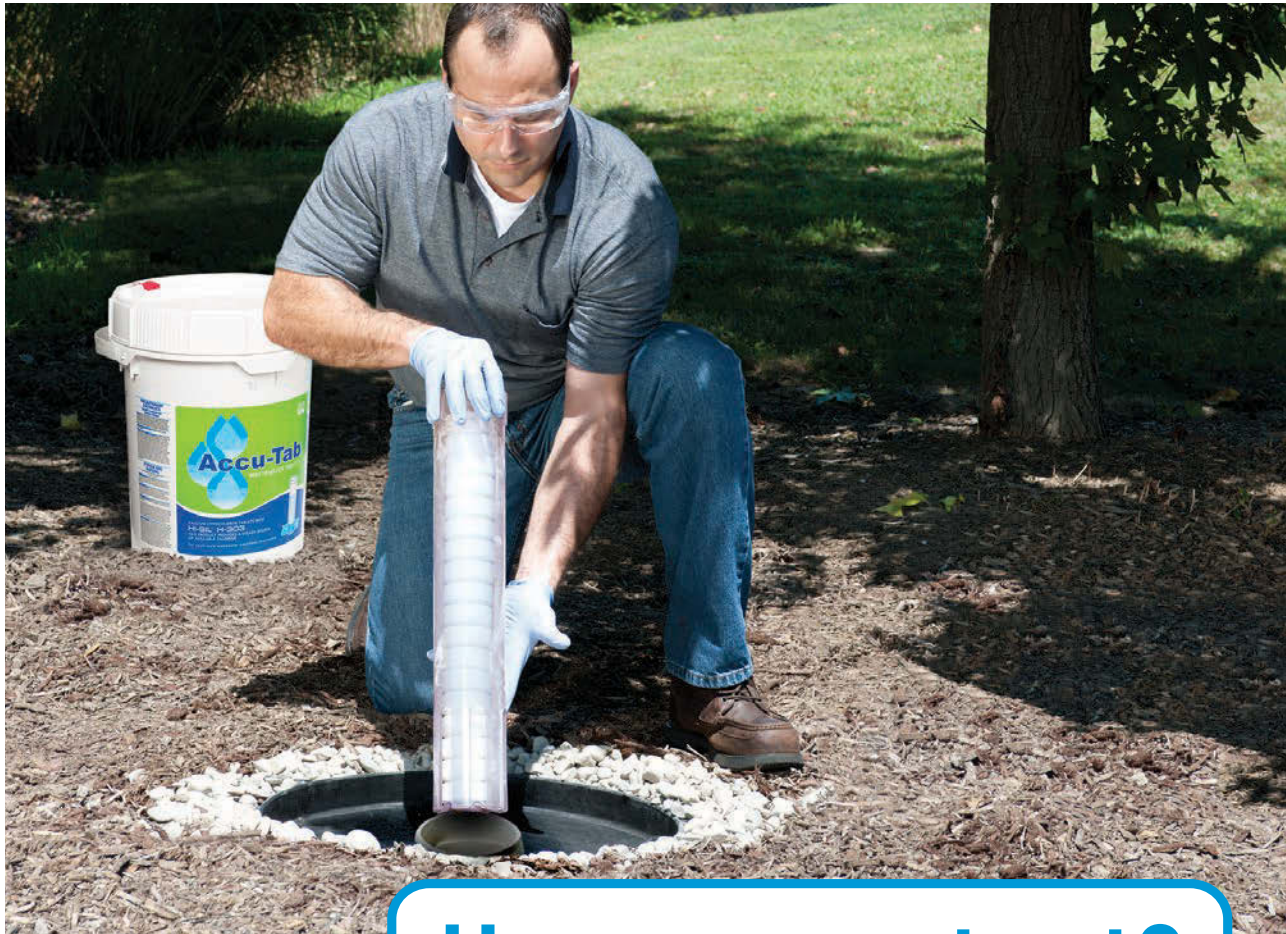


www.facebook.com/OnsiteInstaller

www.twitter.com/OnsiteInstaller

www.plus.google.com

www.youtube.com/OnsiteInstaller



Have we met yet?

We may be new to you, but on-site wastewater expertise isn't new to us.

We offer a new generation of wastewater tablets under our industry-proven Accu-Tab® brand.

- Ideal for on-site aerobic wastewater systems that treat up to 250,000 gallons per day.
- Smaller 2 1/2-inch tablet design reduces the impact of wicking and minimizes risk of tablets getting stuck in feeders.
- Plug-and-play with standard 2 5/8-inch feeders.
- Contains a silica-based erosion modifier (instead of potentially reactive stearates) for on-site applications.



Paying too much for broken, unreliable chlorine tablets in your customers' on-site aerobic wastewater systems?

Get your quote at www.accu-tab.com/wastewaterexperts and information on how ACCU-TAB wastewater tablets provide a higher-quality solution at a lower cost!

Accu-Tab is a registered trademark of Axiall



Presby Environmental

The Next Generation of Wastewater Treatment

Advanced Enviro-Septic® (AES)

- ✓ Passive Non-Mechanical Process
- ✓ Proven and Reliable Track Record
- ✓ Treatment and Dispersal
- ✓ Affordable



SFD & CTD Models
Certified to NSF/ANSI
Standard 40, Class 1



BQO Certified:
NQ 3690-910



European Conformity



*State Specific Installation

“Since 1995, we have designed over 2,100 commercial and residential Presby Systems. Other than misuse or installation errors, we have yet to experience a problem with a single Presby System.”

~David Ames, Ames Associates

Find out why so many Designers and Installers rely on AES

www.PresbyEnvironmental.com • 800-473-5298

advertiserindex

MARCH 2014

COMPANY	PAGE
AERO-TECH	25
Alderon Industries, Inc.	38
Alita Industries, Inc.	38
Ashland Pump	9
Axiall, Inc./ACCU-TAB	5
Bio-Microbics, Inc.	11
BODUS GmbH	17
Seal-R	
BrenLin Company, Inc.	33
BS Design Corp. (The Dirty Bird)	39
Clarus Environmental	31
Crest Precast, Inc.	27
Dalmaray Concrete Products Inc.	39

COMPANY	PAGE
Eljen Corporation	31
Infiltrator Systems, Inc.	3
Jet Inc.	39
Liberty Pumps	2
Netafim USA	17
Pagoda Vent Company	39
Polylok	40
Presby Environmental, Inc.	6

COMPANY	PAGE
RotoSolutions, Inc.	39
Salcor, Inc.	23
See Water Inc.	19
Septic Services, Inc.	27
Septronics, Inc.	25
Sim/Tech Filter Inc.	10

COMPANY	PAGE
Simple Solutions Distributing LLC.	39
SJE-Rhombus®	17
SPI - Septic Products, Inc.	32
T&T Tools, Inc.	30
The Shaddix Company, Inc.	39
Tuf-Tite Inc.	7
Weber Industries - Webtrol Pumps	15
Wieser Concrete Products, Inc.	25

Enjoy this issue!

Established in 2004, *Onsite Installer*™ fosters higher professionalism and profitability for those who design and install septic systems and other onsite wastewater treatment systems.

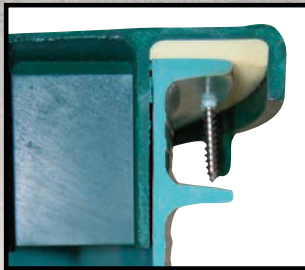
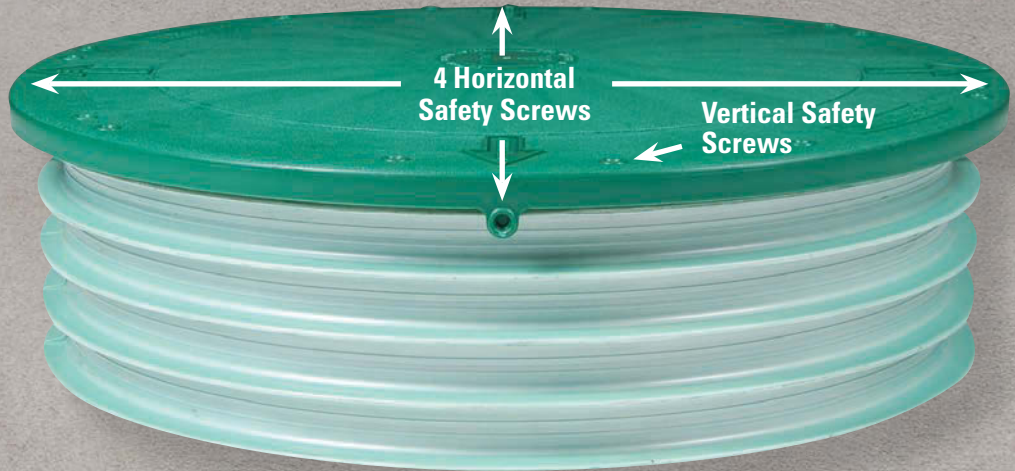
24" HEAVY DUTY MULTI-PURPOSE FLAT RISER LID

**FREE FREIGHT
 on Full Cartons!**

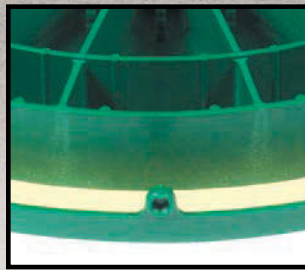
Fits most commercially available:

- Risers
- IPEX PVC Ribbed Pipe
- Corrugated Pipe

LID MAY BE USED WITH OR WITHOUT CONCRETE CENTER



Secured by 6 Vertical and 4 Horizontal Safety Screws. Screws Included.



Foamed-in Permanent Polyurethane Gasket.



Holds up to 70 lbs of Concrete for Added Safety.



Water-TITE™ Joint Vertical and Horizontal Safety Screws

4" Effluent Filter and 4" T-Baffle™

86 ft. of 1/16" filtration area.

Increases time between filter cleaning.



EF-4 Combo Includes Filter, Housing and

4" Sch. 40 & SDR-35

NSF®
 800 GPD
 ANSI/NSF
 Standard 46

NSF®
 COMPONENT
 ANSI/NSF
 Standard 46

EF-4 Combo 18

NSF®
 COMPONENT
 ANSI/NSF
 Standard 46

TB-4-18 Housing
 12/carton

SD-4
 Gas/Solids Deflector

4" Effluent Filter EF-4

One-piece effluent filter fits in 4" Sanitary Tee.

- Injection molded PolyPro
- Simple to install - Easy to clean

4" Sanitary Inlet/Outlet T-Baffle™

Injection molded T-Baffle

- Fits 4" Sch. 40 and SDR-35 pipe
- Simple to install
- May also be used as Inlet & Outlet Tee

6" Effluent Filter and 6" T-Baffle™

244 ft. of 1/16" filtration area.

Increases time between filter cleaning.



EF-6 Combo Includes Filter, Housing and Bushing

4" Sch. 40 & SDR-35

NSF®
 1500 GPD
 ANSI/NSF
 Standard 46

NSF®
 COMPONENT
 ANSI/NSF
 Standard 46

TB-6 Housing

Gas/Solids Deflector

6" Effluent Filter EF-6

One-piece effluent filter fits in 6" T-Baffle™.

- Injection molded PolyPro
- Simple to install
- Easy to clean

6" Sanitary T-Baffle™

Injection molded T-Baffle™.

- Injection molded
- Fits 4" Sch. 40 and SDR-35 pipe
- Simple to install
- May also be used as Outlet Tee with Solids Deflector

Feedback

Onsite Installer™ welcomes your comments, ideas and suggestions on how we can serve you better. Call 800/257-7222; fax 715/546-3786; or email editor@onsiteinstaller.com.

Think Spring

With the economy on the upswing and property developers back at work in many regions, are you geared up for a busy year?

By Jim Kneiszal



Many signs point to a brighter outlook for the U.S. economy this year. The unemployment rate continues to drop. A look back at housing starts for 2013 shows steady growth following the prolonged doldrums after the collapse of 2008-2009. The banking industry is in a more robust position.

As for the new-housing outlook, such a big driver of the onsite installing industry, well it looks rosier in many areas. Seeing positive signs, real estate developers are coming back to planners in many counties and towns skirting cities across the country, looking to subdivide and conquer the market. Every time they turn a cornfield into a 50-lot housing development, it means onsite systems go in the ground.

You want to be in the mix for those jobs. Especially after several lean years where you may have had to let valued employees go, put off equipment upgrades, and spend meager revenues on marketing to capture as many of the dwindling number of new system installs as you could.

ARE YOU STRESSED OUT?

From my discussions with installers over the past year, I sensed a trend that reflected both a careful, conservative approach to rebuilding the business and a stress-raising compunction to burn the candle at both ends. I can sum up the installers' business plan for 2013 in a few words: Do more with less.

An understaffed business with a lack of marketing focus is like a ship without a rudder. If you're occupied with a shovel all day, you're not going to take the time to set goals.

I sensed last summer was a lost summer – as far as enjoying time with the family goes – for many installers. It was difficult for me to reach many of you to discuss stories in this magazine, and when I received a return call, it was often late in the evening after you put in a dozen or more hours on the job. My observation was that installers were busier in 2013 than they've been in years, even perhaps going back to record revenue days of the early 2000s.

How do I explain that? After the dark years following the real estate crash, installers were hesitant to hire additional crew members as the work came back in incremental waves. Many remembered the worry about

making payroll and telling good employees they'd have to look for work elsewhere five years ago. So as the projects started coming back, they made do with a smaller workforce and aging equipment.

Sure, busy is good. But too busy can present some difficult consequences, both personally and professionally. First, I assume if you got married and had children, your intention was to spend quality time with them. Maybe you haven't had enough family time lately. Secondly, prolonged stress in your job puts your health at risk and you're no good to anyone if you're sick or stressed out. And thirdly, if your feet are in a trench all day, you can't see the big picture the way a business owner must to succeed.

THREE THINGS

For many of you, things are looking up. And hopefully the entire industry will benefit from an improved economy this year. So to benefit from an advancing market and put your small business in line for success, I offer these three tasks for March:

Find out where your market is going

It's possible your market may not reflect the national trend. You need to be sure any liveliness you perceive in the local economy is sustainable before making big investments in your company. If you survived the down times, you are probably careful not to overextend yourself in the first place.

So it's a good time for researching your territory.

Check in on your local municipal and county planning offices and find out the situation for buildable residential and commercial lots that would utilize onsite systems. Ask about supply and demand the planners expect this year and compare the inventory of vacant properties to historic numbers. While you're talking to local officials, ask about the relative age of most septic systems in the area and potential tightening of environmental regulations that might prompt an uptick in system replacements.

Talk to area Realtors about the demand for new housing starts compared to the trend in existing home sales. Are there enough available lots to fill existing demand for new houses? Are developers still gun-shy about investing in new projects? Are there pockets of older neighborhoods trending in popularity and signaling a growth in repair and replacement work?

Lastly, take a good look at the employment outlook for your area. If large employers are still having a difficult time, the general recovery that could

help your business may be slower in coming. If businesses are hiring, and you often hear about entrepreneurial startups that are doing well, you may have more reason for optimism.

Assess your staffing needs

Look back at your experience over the past two to three years. Has your revenue steadily risen – along with the hours you have to put in every day? Are you missing out on more important family events and celebrations, prompting some complaints at home? Is cash flow less of an issue – and you're not as frantic about making payroll from week to week? If the answer to these questions is "yes," maybe it's time to look at developing some front-line help.

If you're not able to support a whole new crew at this time, you might add a new helper-in-training to an existing crew, or a floater who will help out on busy projects and work on equipment maintenance or keeping the shop in order. When new business is just starting to percolate is a good time to slowly work a new person into the mix. Remember, the work you do requires a lot of training and doesn't lend itself to simply plugging in a new person and expecting a smooth transition.

Is your office running smoothly? Or do you find yourself pushing paperwork for a few hours every evening? In slow times, sometimes a receptionist, bookkeeper or marketing assistant are the first to go. As things pick up, remember the vital tasks these positions perform and get people on board to handle the work. A well-run office will free you up to bid on more jobs, keep up with your continuing education and give priority to business building.

Ask yourself where you want to be in five years

An understaffed business with a lack of marketing focus is like a ship without a rudder. If you're occupied with a shovel all day, you're not going to take the time to set goals and work toward accomplishing them. And you can bet that if you're not moving forward to fill growing demand, a competitor is filling the void.

You started a business to build something. Perhaps you wanted to pass a thriving enterprise on to your family. Maybe you wanted to build equity in customer lists and equipment to support your retirement? Many of you just love a challenge to be the best installer you can be. Any way you look at it, treading water is not the answer.

There have been bumps in the road, sure, and some of them you had no control over. There's no time like the present to do some forward thinking and set a profitable course for your business. □

Check out **NEW Exclusive Online Content & More!**
www.onsiteinstaller.com

► PROFESSIONAL ◀

What does it mean to be professional? It could mean being an expert in your industry, or having a high-quality line of products. Fortunately, you won't have to decide when you work with the Ashland Pump Company. With over 25 years of expertise and a full line of professional-grade products, Ashland Pump will fulfill all of your pump needs.



Ashland

P U M P

Honest, Professional, Dependable

1899 Cottage Street, Ashland, Ohio 44805
Telephone: 855 281-6830 • Fax: 877 326-1994 • ashlandpump.com

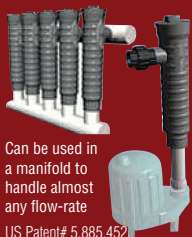
GAG SIM/TECH FILTER

The Last Line of Defense for Pressurized Distribution Systems



NO VAULT PUMP FILTER

- » 41% open area (139 square inches of open area on the 6" x 18" screen model)
- » Fits most turbine pumps (also known as deep well pumps)
- » Adds only 1/4" of height to pump making it easy to retrofit to existing systems
- » Has 3" sludge shield at the bottom of the filter
- » Disassembles for thorough cleaning if needed
- » Easy to clean surface
- » Made of PVC plastic so will not corrode
- » Self adjusting seal
- » Very light in weight so it does not make pump insertion or removal difficult
- » Screen available from 18" to 42" long
- » Also available with 316L stainless steel screen



Can be used in a manifold to handle almost any flow-rate

US Patent# 5,885,452
CAN Patent# 2,237,751

THE STF-100 SERIES PRESSURE FILTER WILL:

- » Lower total suspended solids (TSS)
- » Protect with low head-loss (.5002 ft)
- » Extend the life of the distribution field
- » Filter to .062", .024", .007", or .004"
- » Pass up to 83.8 gallons per minute @ 1PSI
- » Allow for easy installation and service
- » Protect from improper system maintenance
- » Protect from system abuse
- » Satisfy your customers



The 7" filter in a 5" square concrete baffle.

GRAVITY FLOW BRISTLE FILTERS FOR RESIDENTIAL OR COMMERCIAL SYSTEMS, SEPTIC TANKS, ONSITE SYSTEMS, OR EVEN YOUR POND!

Very effective at filtering tissue, hair, lint, and other solids common to waste water. And flexible enough to fit just about anywhere, most common applications are standard "tees" and square concrete baffles as shown below.



The 4" filter in a 4" Tee.

Sizes:
4" yellow
6" white
7" red
8" blue
Patent# 6,811,692

ORIFICE SHIELDS

- » The Original Orifice Protector
- » Sturdy design for all applications
- » Easy to position
- » Will not fill with gravel in any position
- » Large discharge area that does not clog
- » Large open area
- » No moving parts to stick
- » Will remain in place, even without glue



FLOAT TREE ACCESSORIES

- » Easy adjustments
- » No tangled wires
- » No float hang-ups
- » No straps to break
- » No entering tank
- » Easy pump repairs
- » Very affordable

Check Out Our Other Quality Solutions!
Risers, Security Nets, Clean-Out Sweeps, etc.

gag-simtech.com
888-999-3290



@onsiteinstaller.com

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



LAYING RUBBER

Best Tire Buying Tips

Your rig is only as good as its tires. Buy the wrong ones, and you might experience premature wear, decreased safety and higher operating expenses. Purchase the correct tires, and you're looking at increased fuel economy and great stop-start traction. Learn what you should consider before making this major purchase.

www.onsiteinstaller.com/featured

TAX SEASON

How Small Businesses Can Minimize Taxes

Want to minimize taxes and avoid red flags this year? It's all about recordkeeping and deduction-taking. Learn how you can turn tax season into a much-less-stressful season this year. www.onsiteinstaller.com/featured



OVERHEARD ONLINE

"Mandatory septic pumping and system inspections mean more jobs for you and ultimately, more money in your pocket."

Regular Septic Tank Pumping Puts Money in Your Pocket

www.onsiteinstaller.com/featured

emails and alerts



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

CONNECT WITH US
want more?



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

Water doesn't grow on trees.

It's a precious resource. How we solve a water problem is key. Water is life for people and businesses around the world. Only efficient, low cost, easy-to-use wastewater treatment systems make this possible.

That's Bio-Microbics' mission. With over 45,000 installations in the USA and in more than 60 countries, it's what we do every day.



Thanks for
visiting us

**Simple, Low Cost, Robust
Water, Wastewater and Stormwater Treatment Systems**

www.biomicrobics.com | 800.753.FAST (3278) | sales@biomicrobics.com

© 2013 Bio-Microbics Inc.

BIO MICROBICS

BETTER WATER. BETTER WORLD.™



THE PROBLEM Solvers

Canada's OSI set itself up as the champion of the tough job, finding ways to install effective systems on sites with marginal soil conditions

By Gil Longwell

When Ron Parker started working in the onsite wastewater industry, his focus was on overcoming site challenges for property owners in western Canada; the bigger the challenge he met, the more he prospered. After 21 years, the company he runs with his son, Ryan, is built on the idea of overcoming any obstacle to build and maintain quality onsite systems.

Their company, Onsite Systems Inc., concentrates on site evaluation and onsite system design, installation, maintenance and the sale of related technologies. Ron, a professional engineer, and his wife, Pat, are the owners; Ryan manages day-to-day operations.

Based in Duncan, British Columbia, about 55 miles due west of Bellingham, Wash., and about 40 miles southwest of Vancouver, all of Vancouver Island on Canada's west coast is their service area. They will travel up to two hundred miles for a job.

SITE LIMITATIONS

In 1992, with the germ of a business idea planted in Ron, the family traveled across the border to learn about the more advanced technologies being used in the states. It was the start of a technology drive that has never stopped for OSI.

"Overcoming shallow soil site limitations was what drove us to Washington State," says Ron. "We went there for onsite system training. We

Onsite Systems Inc., Duncan, B.C., Canada



OWNERS:	Ron and Pat Parker
YEARS IN BUSINESS:	22
SERVICE AREA:	200-mile radius
SPECIALTIES:	Onsite system design, maintenance/management, repairs and equipment sales
EMPLOYEES:	5
AFFILIATIONS:	British Columbia Onsite Sewage Association, Western Canada Onsite Wastewater Management Association, S. Cowichan Chamber of Commerce
WEBSITE:	www.osieagle.ca

learned about the advanced technology they were deploying." Among the products they learned about was the Orenco sand filter, which expanded their design horizons in the cramped Canadian areas where they worked.



▲ Trefor Digby uses a pressure gauge to ensure the PSI is calibrated correctly in this Orenco Advantex AX 100 system.

<< Shaun Pattenden (from left), senior planner, Ryan Parker, manager, and Trefor Digby, managing technician, look over a map of a development site where Onsite Systems Inc. will perform routine maintenance. (Photos by Abigail Saxton Fisher)

When they started OSI, onsite systems distributing septic tank effluent were not permitted on sites with less than 18 inches of suitable soil. Parker believed improved effluent quality could change that dynamic and allow for safe and successful application on sites with marginal conditions. It turned out he was right, but as with anything new, regulators had to become familiar with the technology, its capabilities, limitations and the opportunities it created. The higher treatment achieved allowed the use of traditional absorption area designs to reintroduce effluent to the environment. In a few cases, the treated effluent has been discharged to the ocean.

Subsurface sand filters were well known in British Columbia and their performance became a benchmark for evaluating other technologies. These new systems did well, and the provincial siting and design regulations were eventually modified to include this technology and others identified later. Over the years, OSI has become a distributor of many treatment products, including those from Orenco. Orenco products were the first branded treatment technology the company was involved with and the ones they have stayed with.

PRODUCT PRESENTATIONS

Introducing new ideas and products to a community is challenging, and best accomplished through individual learning experiences during group events. “For our sales to grow, we recognized that installers needed to

understand the technologies and products we sold. To enable these colleagues, we first had to help them understand their new opportunities,” Ron says.

“We found our own skill sets – site evaluation, design, installation, and operations and maintenance or O&M – all growing,” Ryan adds. Evaluating soils is the first step to match a technology to a site; next comes the design. The province-issued permit follows. During every step, the company’s

Working with the competition

When the phone rings in the middle of – you name it – the night, a blizzard, a hurricane, the caller wants a qualified professional to pick up and respond. Across British Columbia, when an Orenco Vericom control system detects a performance issue, it automatically calls for help. Onsite Systems Incorporated (OSI), in Duncan, B.C., Canada, is the Vericom call center operator for the entire province, and while the call for help may stop there, it is also the place from which help is dispatched.

“We have not installed every system,” says Ron. “But we have had some involvement with every one,” adds Ryan. Through their work as trainers, they enjoy collegial relationships with an established network of maintenance providers across the province as well. The role of call center dispatcher is not one of competitor, rather collaborator. It allows OSI to work with competitive enterprises in their own market without competing for business.

When the issue is problem solving, OSI and the service providers share a singularity of purpose. They are all in there together.



Ryan Parker uses a multimeter to check for proper amperage in electrical components served by an Orenco MVP control panel at a winery on Vancouver Island in British Columbia, Canada.

capabilities, confidence and value to others in the industry grew. “We traveled the province teaching what we had learned,” said Ryan.

The more they learned, the more they could share. Learning, sharing and deploying new technologies became a cycle that continues today. Soon it was apparent that – while important – education was not and should not become the focus of their business.

“It was in 1998 that Dave Jackson, a former employee, and I founded the BC Onsite Sewage Association,” Ron explains. BCOSSA has taken up the primary task of basic and continuing education of onsite professionals. This frees the Parkers to focus on product-specific training delivered primarily in one-on-one situations.

NEW TRAINING STANDARDS

In early 2005, a new provincial law, the BC Health Act’s Sewage System Regulation, set province-wide training and certification requirements for those performing most onsite system tasks. The law assigns the training role to BCOSSA. Association-developed curriculum that satisfies the

“System designs are filed with the health department agency, however only the designer is checking for compliance, and under this new system, they are checking their own work.”

Ron Parker



technical and content requirements of the provincial Applied Science Technologists & Technicians of BC (ASTTBC) is presented. That entity issues credentials to planners, who do site evaluations and prepare designs, and installers, maintenance providers and inspectors, who evaluate existing systems at the time of property sales.

Creating a highly trained and educated workforce, the act has also changed the administrative process by which sites are evaluated and systems are designed and approved. Provincial Department of Health employees no longer perform site evaluations to assure suitability for onsite systems.

“System designs are filed with the health department agency, however only the designer is checking for compliance, and under this new system, they are checking their own work,” Ron explains. Ryan sees the same process being applied to installations.

“We’re looking for more policing of what goes on in the field,” he says. “There is a belief among many onsite professionals that the process has effectively been set up to fail.”

At first blush, it seems unlikely for regulated businesses to want greater government oversight. But seeking the perfect balance of oversight without micromanagement is, however, something many

onsite professionals value. In this case, raising the bar on professionalism, accuracy and appropriateness of solutions, and the quality of installation are the goals OSI is pursuing.

DEMAND GROWS FOR O&M

OSI is different from most onsite installers in that it doesn’t own and maintain any heavy equipment needed to do the dirt work. The Parkers prefer to lease machinery as needed.

“A while back, Ryan’s brother worked for the company. He owned the equipment we needed and we deployed it, as needed, through a subcontracting arrangement,” Ron explains. They have found it to be more cost-effective to rent a machine and operator than to sustain these investments through slow times. This allows the company to work within



Shaun Pattenden and Trefor Digby review maintenance records during a routine system check on Vancouver Island in British Columbia.

WEBTROL
Quality Pumps

*Celebrating 50 Years
of Pump Manufacturing*

INTRODUCING THE

MVP
GRINDERS

Features & Specifications

- Heads up to 400 feet
- Flows up to 40 GPM
- 1, 1.5 & 2 HP, 60 Hz models
- Also available in prepackaged basins

**CONTACT US FOR
FACTORY DIRECT
SALES**

www.WEBTROL.com 1-800-769-PUMP (7867) customerservice@webtrol.com



Shaun Pattenden cleans an Orenco biotube filter, while Trefor Digby (left) uses a Sludge Judge (Nasco) to measure sludge and scum levels to determine if the tanks require pumping. Ryan Parker looks on.

its project niche area and not have to take on all sorts of work just to pay the bills. That would be a distraction.

The recent economy has reduced demand for installation for OSI, but operation and maintenance needs continue. Accordingly, the balance of business is moving the company toward the latter. “We have room to expand in this area without reducing our work in other segments,” says Ryan.

“Through 2008 we were operating full bore; until then, the effect of the 2005 regulation change had not fully kicked-in,” Ron says. “We saw some decline, but it was not until 2008 that we really noticed it,” Ryan adds. That’s when a 20 percent drop in work across the board hit the province, which slowed new construction-related work, but it did not stop the need for O&M.

“Overcoming shallow soil site limitations was what drove us to Washington State. We went there for onsite system training. We learned about the advanced technology they were deploying.”

Ron Parker

“If the O&M service opportunity or need arises, we will satisfy it, but only for systems we have had some involvement in,” says Ryan. As an Orenco distributor, they have been heavily involved in use of those products as an installer, designer, component provider and installer trainer. They currently do not offer O&M support for any other proprietary systems, however that may change. “We are considering cross-training,” said Ron.

SMALL AND EFFICIENT

Eschewing an equipment fleet enables the company to maintain its operations in a modest, former single-family house in a quiet Duncan neighborhood. The house’s two-car garage is their warehouse and workshop. They also have an arrangement with a tank manufacturer to keep their Orenco inventory on his nearby lot.

In addition to the Orenco systems, the company also utilizes Xerxes ZCL fiberglass-reinforced tanks for commercial work applications.

A 1998 Chevy pickup is the entire vehicle pool. As needed, Ryan’s 2007 Toyota pickup is used as well. “When we need Orenco components delivered, we coordinate that with the septic tank delivery and the tank manufacturer brings both at once,” Ryan says.

Business promotion includes a website and targeted direct (postal) and email campaigns. The latter are focused on maintenance services in neighborhoods with special environmental considerations like lakeshore communities. Twice a year the company takes its training program on the road to the installer and service provider communities. “There are times when we attach magnetic signs on the truck as another way to get the word out,” said Ryan.

In addition to Ron and Ryan, Shaun Pattenden, a soil specialist, Trefor Digby, their maintenance technician, and Linda Taylor, administrator, round out the OSI team. Although Ron and Pat are officially retired, they are always available for consultation.

There are some onsite services the company has chosen not to pursue. The two standouts are tank pumping and real estate presale system inspections.

“Both of these tasks are referred to appropriately credentialed local entrepreneurs who have the specialized equipment that is needed for this work,” explains Ryan.

Founded on Canada’s western frontier, this two-generation company continues to pioneer new techniques and technologies, enhance practitioners’ competency level and strengthen the associations they helped establish. **□**

MORE INFO:

Nasco
800/558-9595
www.whirl-pak.com

Orenco Systems, Inc.
800/348-9843
www.orencosystems.com

Xerxes Corporation
952/887-1890
www.xerxes.com

ONSITE CONTROLS

No matter the application, we've got you covered, from float switches to event monitoring control panels, and everything in between.



www.sjrhombus.com



IFS Panels with C-Level™ Sensor
C-Level™ sensor detects the liquid level in the tank and sends a signal to the IFS panel. Pump activation and alarm levels are adjusted on the panel touch pad, eliminating the need to go into the tank. One C-Level™ sensor simulates up to four (float) levels.



Tank Alert® EZ Alarm System
This new alarm is all about making installations easier! It features an innovative enclosure which integrates the red LED beacon, external mounting tabs for quick installation and a removable cover which allows greater access for easier field wiring.



Panel Mounting Post & Kits
Check out our new panel mounting post, riser mounting kit, simplex and duplex installation kits which provide easy installation of control panels! The post features a removable access door for easy wiring and accommodates panel enclosures up to 14x12x6".

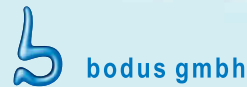
THE EASIEST AND MOST ECONOMICAL - PERIOD.

BIOLINE® DRIP DISPERSAL BY NETAFIM

Stop disposing, start dispersing with Bioline for a cleaner and greener tomorrow, and today



www.netafimusa.com/wastewater



Pipe Technology

Call now +1 415 527 08 96

Pneumatic gripper



The fishing rod!



The only one... who catches everything out of the pipe!



www.bodus-usa.com



What is that gripper?

A brilliant pneumatic gripper, especially designed for catching objects in pipes or in conducts of ventilation.

Advantages	Technical data
<ul style="list-style-type: none"> Arcade-shaped up to 90° from Ø 4 inch and bigger Operating range up to 82 ft (standard), longer range possible Fast and simple maintenance Safe money because no detection needed Installation of a camera possible (optional) Easy handling by use of push bars made of plastic. Either taken from Cutter MWR 10/20 or elsewhere Connections: rigid coupling 	<ul style="list-style-type: none"> Length approx. 9.45 inch Diameter approx. Ø 2.17 inch Weight approx. 10.58 lbm(lb) <p>PATENT ANNOUNCED</p>

Subject to technical amendments.

bodus gmbh
Schifflandstrasse 45
CH-5000 Aarau

www.bodus-usa.com

Tel.: +41 (0)62 837 60 00
Fax: +41 (0)62 837 60 01
bodus@bodus-usa.com

Getting Started

Wastewater trade association takes off in Arkansas to represent pumpers and installers on new regulations

By Doug Day

The Arkansas Onsite Wastewater Association has only been around since April 2010. While it could use more resources to recruit members, it takes members to get those resources. It would help if they had more power in the legislature, but that requires numbers, as well.

ARKOWA was formed by Don Daley (president) and his wife Peggy (secretary/treasurer). We talked to Don about the group's founding and its future:

What prompted you to start the organization?

Daley: My wife and I are both system designers and we were working with the owners of some highly valuable lake property. We found out we had to go through a lot of hassles. They got turned down for a septic system and we couldn't find any way to get a system approved. We ran into regulations we'd never heard of and nobody could tell us how they became law. We talked to our state representative, who is now a state senator, about how we get into the loop when regulations are being made. He told us if we wanted a say, we needed a professional association and he would help us get started and get us a seat at the table.

The Board of Directors of the Arkansas Onsite Wastewater Association represent all areas of the onsite wastewater industry. The officers are:

Don Daley – President (designer)
Sitewise LLC

Peggy Daley - Secretary/Treasurer (designer)
Sitewise LLC

Joe Smith (installer)
Smith Excavating

Mike O'Connor (manufacturer)
Clear Flow

Darius Melton (pumper)
2M Pumping Service



Don and Peggy Daley may be reached at 501/617-1046 or don.daley@sitewisearkansas.com.

There were a few people interested and nobody had the time, so we spent about two years and our own money incorporating ARKOWA and have been trying to get the membership up ever since.

How many members do you have?

Daley: We have about 60 members out of about 900 people licensed to do septic work. Who knows how many of them are really active? We're still in our infancy, but we do have enough people that the legislature will talk to us. It's better than it used to be.







If somebody wants something and there's nobody there to oppose, it goes right through a committee and to the legislature and nobody has questioned it. If you have an association, you can go into committee meetings and sign up for or against a bill. There were a lot of those types of special interest things that got through. The legislature now knows there is somebody who is interested and it gives them a cause to ask a few more questions.

But it is a numbers game, and that's what we tell potential members. The more members, the more influence you have. Most of the legislators can't relate to onsite wastewater because most of them are on city sewer. It's completely foreign to them.









What types of things are you working on?

Daley: There are officials in the Arkansas Department of Health who would like to see the association get up and going and take over some of the

Onsite Installer Pumps DIRECTORY 2014

	AERATION	EFFLUENT	GRINDER/SEWAGE/SUMP	LIFT STATION	PUMP ALARMS & CONTROLS	PUMP PARTS/COMPONENTS	PUMP REPAIR/SERVICE	SOLIDS/SLUDGE	SUBMERSIBLE	OTHER
 Alderion Industries 110 15th St. S, Hawley, MN 56549 218-483-3034 Fax: 218-483-3036 info@alderionind.com www.alderionind.com See ad page 38					✓					
 Alita Industries, Inc. 13311 Brooks Dr., Ste. B, Baldwin Park, CA 91706 626-962-2116 Fax: 626-962-2177 sales@alita.com www.alita.com See ad page 38	✓									
 Aquaworx by Infiltrator 4 Business Park Rd., Old Saybrook, CT 06475 877-278-2979 info@infiltratorsystems.com www.aquaworx.com See ad page 3					✓					
 Ashland Pump 1899 Cottage St., Ashland, OH 44805 855-281-6830 rrickes@ashlandpump.com www.ashlandpump.com See ad page 9		✓	✓	✓	✓			✓	✓	
 Clarus Environmental Products/Zoeller Company 3649 Cane Run Rd., Louisville, KY 40211 800-928-7867 502-778-2731 Fax: 502-774-3624 info@zoeller.com www.clarusenvironmental.com See ad page 31		✓	✓	✓	✓				✓	
Flygt - a Xylem Brand 14125 S Bridge Cir., Charlotte, NC 28273 704-409-9700 Fax: 704-295-9080 www.flygtus.com			✓	✓	✓	✓		✓	✓	Centrifugal
 Franklin Electric/Little Giant 301 N MacArthur Blvd., Oklahoma City, OK 73127 866-271-2859 Fax: 866-271-2709 www.franklinwater.com		✓	✓		✓	✓		✓	✓	
 Gorman-Rupp Company 600 S Airport Rd., Mansfield, OH 44903 419-755-1011 Fax: 419-755-1251 grsales@gormanrupp.com www.GRpumps.com		✓	✓	✓	✓	✓		✓	✓	
 Goulds Water Technology - a xylem brand 2881 E Bayard St., Seneca Falls, NY 13148 866-325-4210 315-255-3378 Fax: 315-253-7408 info@gouldswatertechnology.com www.goulds.com		✓	✓	✓	✓				✓	
 Jet, Inc. 750 Alpha Dr., Highland Heights, OH 44143 800-321-6960 Fax: 440-442-9008 email@jetincorp.com www.jetincorp.com See ad page 39	✓				✓	✓				
 Liberty Pumps 7000 Apple Tree Ave., Bergen, NY 14416 800-543-2550 585-494-1817 Fax: 585-494-1839 laurie.pfaff@libertypumps.com www.libertypumps.com See ad page 2		✓	✓	✓	✓				✓	
Norweco, Inc. 220 Republic St., Norwalk, OH 44857 800-NORWECO 419-668-4471 Fax: 419-663-5440 email@norweco.com www.norweco.com	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Onsite Installer Pumps DIRECTORY 2014

		AERATION	EFFLUENT	GRINDER/SEWAGE/SUMP	LIFT STATION	PUMP ALARMS & CONTROLS	PUMP PARTS/COMPONENTS	PUMP REPAIR/SERVICE	SOLIDS/SLUDGE	SUBMERSIBLE	OTHER
	Pentair 1101 Myers Pkwy., Ashland, OH 44805 888-416-9513 419-281-9944 Fax: 419-281-9980 enewsreplies@pentair.com www.pentair.com		✓	✓	✓	✓	✓	✓	✓	✓	
	Polylok, Inc. 3 Fairchild Blvd., Wallingford, CT 06492 877-765-9565 Fax: 203-284-8514 sales@polylok.com www.polylok.com	✓	✓	✓	✓				✓	✓	
	Quanics Inc. PO Box 1520, Crestwood, KY 40014 502-992-8200 tjenkins@quanics.net www.quanics.net		✓	✓	✓	✓				✓	
	Septic Services, Inc. PO Box 632, Union, MO 63084 800-536-5564 636-583-5564 Fax: 636-583-6432 sales@septicsew.com www.septicsew.com/store	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Septronics Inc. 602 E Union St., Oconomowoc, WI 53066 888-565-8908 262-567-9030 Fax: 262-567-9532 sales@septronicsinc.com www.septronicsinc.com					✓					
	SJE-Rhombus 22650 Cty. Hwy 6, Detroit Lakes, MN 56502 888-DIAL-SJE 218-847-1317 Fax: 218-847-4617 sje@sjerhombus.com www.sjerhombus.com					✓	✓				
	SPI - Septic Products, Inc. 1378 Twp. Rd. 743, Ashland, OH 44805 419-282-5933 Fax: 419-282-5943 sales@septicproducts.com www.septicproducts.com					✓	✓				
	Sulzer Pumps/ABS USA 140 Pond View Dr., Meriden, CT 06450 800-525-779 203-238-2700 Fax: 203-238-0738 info.abs.usa@sulzer.com www.sulzer.com	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Webtrol Pumps 8417 New Hampshire, St. Louis, MO 63123 314-631-1804 Fax: 314-631-1804 rweber@webtrol.com www.webtrol.com		✓	✓	✓					✓	

IT'S YOUR MAGAZINE.

TELL US YOUR STORY.

At Onsite Installer, we're looking for companies with an interesting story to tell. If you'd like to share your story, send us a note at editor@onsiteinstaller.com.

www.onsiteinstaller.com





With excavation complete, the crew awaits the new tank to hold the BioBarrier system. At the center of the photo is the riser lid for the home's existing septic tank that was repurposed for settling and filtration. (Photos courtesy of David Zeiter)

Getting It Right

A failed system, an adventurous homeowner and new technology create the opportunity for a better onsite solution in Illinois

By David Steinkraus

The combination of a sensitive site and a client sensitive to the environmental effects of his wastewater system gave David Zeiter and his company a chance to stretch with a new technology. There was one other factor: The household system had failed.

“Unfortunately the house was only three years old when the septic system failed,” says Zeiter, who is president of Zeiter’s Septics Unlimited in Morris, Ill. “I think, with the soils there, the system was not sized properly from the outset.”

As soon as he saw the site and the old, flooded quarry 200 feet from the house, he knew what to expect. “We found bedrock at 3 feet all over. In half a dozen holes in an area 200 by 1,000 feet, we hit bedrock no matter where we dug. They happened to put the old system in a place where the bedrock was a bit farther down.”

The first system consisted of a 1,500-gallon Infiltrator tank and 210 Infiltrator EQ

A 4-inch SaniTEE was added to the home’s existing septic tank to improve the filtration of effluent flowing to the tank holding the BioBarrier.



SYSTEM PROFILE

Location:	Kankakee, Ill.
Facility served:	Single-family residence
Designer and Installer:	David Zeiter, Zeiter Septics Unlimited, Morris, Ill.
Site conditions:	Soils of silt loam, clay loam, and silty and sandy clay loam, draining moderate to well, but with bedrock contact at 30 to 39 inches
Type of system:	Domestic wastewater recycling using aerobic aeration and a BioBarrier membrane filter from Bio-Microbics Inc. with discharge to surface waters.
Hydraulic capacity:	500 gpd

chambers. The soils report found no penetration below 30 to 45 inches, and one core found a seasonal high water table at 36 inches. When the system failed, the symptoms were classic: Water from the last two laterals in the installation broke through the surface of the ground.

Test holes were required by the local health department, and the results changed the outlook for the property near Kankakee, Ill. The conventional solution in shallow bedrock would have been a raised filter bed, but that

was too expensive for the homeowner. At that time, Zeiter went to a session about the BioBarrier made by a division of Bio-Microbics. The BioBarrier unit uses a blower to sustain aerobic bacteria, but its defining feature is a membrane filter with pore sizes between 0.3 and 1.3 microns. This is large enough to pass water molecules but too small for bacteria. Water coming out of the unit is clean enough for secondary uses such as yard and garden irrigation, flushing toilets, even for washing clothes, Zeiter says.

This appealed to the property owner Ben Haigh. Various pieces of mining equipment and old military vehicles have been sunk in the quarry, and divers from a wide area come for sport or certification. Haigh had installed his own geothermal heat system and wanted to do his part to keep the quarry's waters clean. He chose a BioBarrier system, and his project became the first installation of the unit in Illinois.

EQUIPMENT

Because the failed system was recent, Zeiter used the existing septic tank for primary treatment and settling. But Zeiter removed the original baffle and installed a 4-inch SaniTEE from Bio-Microbics to provide filtration of effluent.

From the septic tank, wastewater flows by gravity into the second treatment tank, a 1,500-gallon model from Wieser Concrete of Maiden Rock, Wis. Zeiter picked the company because it molds tanks to specification and delivers quickly. In this case he specified a side hole to fit the alignment of the existing septic tank. He also



The BioBarrier unit in place inside the new concrete tank.

"We found bedrock at 3 feet all over. In half a dozen holes in an area 200 by 1,000 feet, we hit bedrock no matter where we dug."

David Zeiter

specified Infiltrator risers, one 24 inches and the other 30 inches to allow for installation of the BioBarrier unit. Stainless steel cables connect to the side of the BioBarrier so its 100-pound full weight can be winched out of the tank for maintenance.

A 1/5 hp pump from Goulds pulls water through the BioBarrier membrane and discharges through a 3/8-inch hose. This is stepped up to a

"36 Years of Excellence"

SALCOR UV DISINFECTION

**SURVIVES Most Weather Disasters
ATTACKS "SUPER BUGS" &
PRESERVES Sensitive Environments!**

Proven Water Recovery Solutions





UL & cUL (Canada) Certified

30-Day Underwater Tests Demonstrate the 3G's "Floodproof" Listing for Underground Operation



Mud River Project, WV

Over 90 Salcor 3G UV Units Installed with ANUA Peat Filters



Ocean Front Restaurant, CA

4 Salcor 3G UV Units in a Parallel/ Series Array



Residential, Commercial & Municipal Parallel/ Series Arrays

Gravity Flow Disinfection to 100,000 GPD

Ultimate Health and Environmental Protection

- Exceptional Bacteria/Virus "Kill" ▪ Energy Efficient - Less Than 30-Watts!
- No Harmful Chemical By-products - Enables Water REUSE

Most Third Party Tested & Approved

- UL (US & Canada) Certified "Underground Floodproof" NEMA 6P UV Unit, (30-Day Submergence)
- Outstanding NSF 6-month Tests with 20 Individual Treatment Plant Systems
- Univ. of Rhode Island 5-yr Home Demonstration Test
- Over 16 Years Field Experience

Onsite Residential, Commercial & Municipal Uses

- Gravity Flow up to 100,000 GPD with Multiple 9,000 GPD Units
- Quick Easy Install In Ground or Pump Tank
- Reliable Operation (Continual Dual Performance Monitors)
- Subassembly Conveniently Removable to Clean/Replace 2-Yr Lamp
- Minimal Annual Maintenance - Teflon® Film Resists Fouling
- Power Surge Protection
- Electrical Noise Suppression



UL LISTED



Made in the USA



THANKS FOR VISITING US

Learn Why Our Salcor 3G Leads Wastewater UV Disinfection Sales!

Salcor Inc. • 760.731.0745 • F: 760.731.2405 • jsruver@aol.com



As installation progresses, the new 1,500-gallon Wieser Concrete Products tank is put in place. It holds the BioBarrier unit. The green riser lid at left marks the 1,250-gallon septic tank that Dave Zeiter uses for effluent settling and filtration. The pipe leading to the rear of the photo takes recycled water from the BioBarrier to a drainline leading from the home's downspouts to a nearby flooded quarry.

1 1/2 inch hose before it leaves the tank, and the flow joins a 6-inch pipe from the home's downspouts. This water flows 200 feet to the quarry.

Zeiter's workers did their excavating with a Komatsu PC 128 and did backfilling with a Bobcat T250.

A panel made by Maveric Automation for Bio-Microbics controls the system.

INSTALLING WITH ZERO PITCH

The BioBarrier tank sits on 6 inches of sand laid right on top of bedrock. When he looked at the tank height they were forced to accept, Zeiter realized he had zero pitch to the drain line that leads to the quarry. Then Kurt Bihler, the local BioBarrier representative from Bihler Tech Inc., stopped by.

"He is very knowledgeable when it comes to pumps and total dynamic head pressure, and he says, 'Let's shoot some grades: where we come out of the tank with the pipe and the line at the gutter tile.' So we did, and he says that little pump would do the job. Kurt says, 'Dave, trust me. This is what I do.'"

It worked. From the top of the tank the discharge line went down 3 feet to avoid frost, then back up 3 feet into an inspection port, and then into the 6-inch drainline. When they started it up, the little pump took a couple of

minutes to push the water that far, but it got there. "So we were able to eliminate a lift station, use the existing pump, and save the owner about \$1,000," Zeiter says.

No restoration was required. Extra dirt went to a motocross track for Haigh's son.

Zeiter achieved a faster startup time and better efficiency because of the way he seeded the system. BioMicrobics recommends two gallons of activated sludge for startup. Zeiter hauled in about 800 gallons of aerated liquor from a local municipality, which was happy to give it away for free. When initially started with activated sludge, the BioBarrier requires six to eight hours to pull the designed flow of water through the membrane because solids clog the membrane. As aerobic digestion improves, it reduces the

"Unfortunately the house was only three years old when the septic system failed. I think, with the soils there, the system was not sized properly from the outset."

David Zeiter

quantity of solids and the time to move water decreases, Zeiter says. His installation treated the average daily usage of 250 gallons in about 2 1/2 hours from the beginning.

Another useful feature, Zeiter says, is a data port that allows him to download operating information onto a USB drive. It comes out of the control panel in a basic format (comma-separated values, a .csv file) that can be easily imported into Excel or other programs for analysis. Results have been so good that Zeiter's technicians may not have to do any cleaning of the membrane during the initial two-year service commitment.

STATE OF UNCERTAINTY

Like other states, Illinois is trying to eliminate surface discharges. That made Kankakee County staff ask plenty of questions when Zeiter came in with a new technology discharging to a surface body of water.

There was no room for this in the current code,

and one of the county staff questioned whether chlorination would be required.

Ultimately the question went all the way to the state capitol in Springfield and the state's environmental health director. He wrote a letter granting a variance for BioBarrier installations, Zeiter says. Until Illinois rewrites its sanitary code, the letter will allow him and other contractors to do additional installations.

The solution came along at just the right time for this project, and Zeiter connected with a homeowner who was not interested in the fast and cheap. "He was looking at the long-term solution and embracing a new technology," Zeiter says. □

MORE INFO:

Bio-Microbics, Inc.
800/753-3278
www.biomicrobics.com
(See ad page 11)

**Goulds Water Technology
- a Xylem Brand**
866/325-4210
www.gouldswatertechnology.com

Infiltrator Systems, Inc.
800/221-4436
www.infiltratorsystems.com
(See ad page 3)

**Wieser Concrete
Products, Inc.**
800/325-8456
www.wieserconcrete.com
(See ad page 25)

Junction Boxes, Alarms, Pedestals, & Pump Controls

Septronics® Inc.

"Listen UP Comrades!"

SEPTRONICS HAS ALL THE PUMP CONTROLS AND ALARMS YOU NEED FOR 2014

- Exterior Pump Controls w/Exterior Alarms
— Pedestal Mount or Wall Mounted
- Exterior Pump Controls w/Interior Alarms
— Pedestal Mount or Wall Mounted
- Controls w/ Event Counters & Circuit Breakers
- Exterior & Interior Alarms
— Single, Dual, or Auxiliary Options
- Mechanical Float Switches
— Heavy or Standard Duty, Vertical, Hi Temp



All contractors are eligible to join for specials and surprises

"Comrades Club"

Email your name & address to susan@septronicsinc.com



www.septronicsinc.com

Ph: 262.567.9030 • Email: susan@septronicsinc.com

AERO-TECH

Aerobic Treatment Units

Fiberglass Tank
Designed For Superior Strength,
Corrosion Resistance,
and Lighter Weight



2' x 2' Hinged
Tamper-Proof
Access Hatch

Submersible, Low Noise
Aerator w/ 5-yr. Warranty,
Requires Minimal Maintenance



- ANSI Standard 40
- TSS - 6
 - CBOD₅ - 5
 - DO - 4



2900 Gary Drive - Plymouth, IN 46563 - Phone (574) 935-0908

BUILD STRONG - BUILD SAFE

WITH PRECAST TANKS TO 40,000 GALLONS

- ◆ Septic, Grease Interceptors, Aeration, Holding Tanks
- ◆ Available in Sizes 750 to 40,000 Gallon
- ◆ Extra Heavy Duty Tanks — HS20 Loading
- ◆ Fast, Efficient Settings



Visit us on the Web: www.wieserconcrete.com

- ◆ Vacuum-Tested, Water Tight Structures
- ◆ Tanks for Bio-Microbics and Nibblers, Sand Filters
- ◆ Custom Sizes Available to Fit Your Needs
- ◆ National Delivery and Setting

WIESER CONCRETE
Innovation, Quality
and Service since 1965



1-800-325-8456

Jim Anderson, Ph.D., and David Gustafson, P.E., are connected with the University of Minnesota onsite wastewater treatment education program. David is Extension Onsite Sewage Treatment Educator. Jim is former director of the university's Water Resources Center and is now an emeritus professor, as well as education program coordinator for the National Association of Wastewater Technicians. Readers are welcome to submit questions or article suggestions to Jim and David. Write to ander045@umn.edu.

Landscaping is Critical

As installers, you're most concerned about what goes underground. But the customers you have to satisfy might be focused more on aesthetics.

By Jim Anderson, Ph.D., and David Gustafson, P.E.

In Minnesota, one of the biggest complaints we hear from homeowners is: "I need a new septic system; do I have to have one of those systems that ends up looking like a big pile of dirt in my yard?"

As we travel around the country, this question or complaint is worded a little differently, but it remains an issue that causes homeowners a lot of anxiety. They want to know, after all the equipment leaves, what their yard is going to look like. In Minnesota, this often comes about because of our high percentage of soils with high water tables. The result is a large number of above-ground at-grade and mound systems. In other situations, homeowners wonder if they can preserve elements of their landscaping, such as flowerbeds, trees or shrubs.

If the fill to finish off the shape of the system will be in contact with the trees, a rock well or landscape feature must be incorporated so the soil doesn't contact the tree bark.

The installer who knows how to deal with these questions and has an understanding of landscaping concepts will have a leg up on competitors who just want to plop a system on the lot and do a minimal amount of grading to smooth things out, then be on their way. As always, the best way to have a happy repeat customer who recommends you to others is effective communication at every stage of an installation and going forward.

VEGETATIVE COVER

In humid areas, one important aspect of a properly functioning soil treatment area is establishing good vegetative cover. This is true for belowground or above-ground systems. Having a good, solid well-maintained cover keeps soil from eroding, allows the vegetation to remove moisture and nutrients from the soil, provides an insulating layer and makes the area more aesthetically pleasing.

Planting the wrong vegetation can cause irreparable damage to the system, so it is key to know the best types of ground cover for your area. Trees, shrubs and any herbaceous plants that have extensive root systems should not be placed on top of or near the system. In general herbaceous plants such as turf grasses, wildflowers and native grasses are suitable for

cover. The University of Minnesota offers a listing of plants suitable for system cover found on their website, www.septic.umn.edu.

Turf grasses are probably most often used. They have fibrous root systems that hold the soil in place, and many varieties are available, from shade-tolerant to those that can take more sun and dryness. Choosing varieties that fit the site is important. Homeowners should be aware that turf grasses require regular lawn maintenance, so if the homeowner does not want to be fertilizing, watering, etc., use of native grasses or wildflowers may be a good option.

Native grasses and wildflowers are attractive alternatives and provide the same functions as turf grasses without some of the maintenance. Native vegetation is usually more drought-tolerant which is good from two perspectives. First, the vegetation can survive better during dry periods without watering over the top of the system, and since they are drought-tolerant, the native plantings are less likely to aggressively search for water contained in the system. That means fewer problems due to root penetration.

With any groundcover solution, it's important to limit the traffic over the systems during planting and to avoid methods of preparation that cause soil compaction problems now or maintenance issues due to working the soil later. Compaction will limit the soil's ability to conduct water and oxygen around the system.

OPTIONAL SHAPES

One of the chief complaints with above-ground mounds and at-grades, particularly on nearly level lots, is that homeowners end up with a 3- to 4-foot-high rectangular-looking lump in the middle of their yards ... with a bunch of white pipes sticking out. When installers hear this complaint, they can present options for system placement and the final shape of the system.

Suggestions can include changing the shape or orientation of the system if the topography allows, transforming that pile of dirt into a privacy barrier, windbreak, landscape focus or a screen to block off views from the road. Here you may need to work with the designer and the homeowner so there is agreement about the placement and that it fits with the site constraints.

On sloping sites, it's often more feasible to fit the mound or at-grade into the landscape, reducing the profile and resulting in a different shape. The system needs to line up or be installed on the contour, providing an opportunity to add additional fill to blend it in with natural landscape

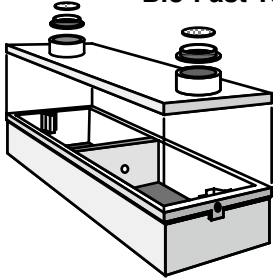
Water Tight Structures 2 Compartment

Commercial Sizes - Gallons

2,000 - 3,000 - 5,000 - 6,000 - 8,000
10,000 - 12,000 - 15,000 - 18,000
20,000 - 25,000 - 30,000 - 38,000 - 40,000

Water Tight Construction
Tanks meet ASTM C1227 and C913

Septic Tanks - Sand Filters - Grease Interceptors
Bio-Fast Tanks - Nibbler Tanks



Nationwide Service

CREST Precast, Inc.
PCI & NPCA Certified Plant
1-800-658-9045

www.crestprecastconcrete.com info@crestprecastconcrete.com

features. This reduces the profile and makes the slope smoother and more gradual. Fill used to blend the system into the landscape should be clean and suitable for establishing vegetation. However, since it is not part of the treatment component, it does not have to be clean sand.

A couple of notes: Fill placed over the top of the mound or at-grade should not be more than 30 inches deep to maintain good moisture and oxygen exchange. Trees the homeowner wants to keep – either upslope or downslope from the actual treatment area – can be left in place. However, if the fill to finish off the shape of the system will be in contact with the trees, a rock well or landscape feature must be incorporated so the soil doesn't contact the tree bark. This contact will result in a fungus that will begin to attack the tree, ultimately killing it. The installer may be long gone at this point because that process may take a couple of years, but the homeowner is not going to be happy.

Native vegetation on a mound or at-grade system requires little maintenance, simple regular checks every few months for disruptive burrowing animals, which should be removed. In any system where the grass is not regularly mowed, this is probably a good recommendation.

Next month we will continue on the landscape theme and look at some specific planting techniques and tips. □

FREE
Subscription

subscribe online - onsiteinstaller.com



Over 30 years experience

SEPTIC SERVICES, INC.

SEPTIC SYSTEM PUMPS, PARTS AND SUPPLIES STORE

TO ORDER



SHOP ONLINE

CALL TOLL FREE: (800) 536-5564

www.septicserv.com/store
(636) 583-5564



MAXAIR500 SUBMERSIBLE SEPTIC AERATOR

- Motor is fully enclosed, continuous duty
- Stainless steel motor enclosure & legs
- 15-foot power cord

\$425.00
2-YEAR WARRANTY

Replacement for Multi-Flo Aerator *

* All original equipment manufacturer's names, drawings, and part numbers are used for identification purposes only, and we are in no way implying that any of our products are original equipment parts. Not associated with Multi-Flo or Consolidated Treatment Systems.



Whirlwind STA80AL Linear Air Pump

Integrated audible alarm & warning light with toggle testing switch.

\$320.00
2-YEAR WARRANTY



AERATORS

Superior replacement for all 60-80-100 model pumps on the market

2-Year Warranty

Whirlwind Linear Air Pumps

Models:
STA60 * ... \$220.00
STA80 * ... \$250.00
STA100 ... \$340.00

* Available with hose bib for low pressure alarm connection.



REGENERATIVE BLOWERS

18-Month Warranty

Whirlwind R-5760 ... \$400.00
(57 CFM)

FLAGG-AIR 340HP AERATORS



MADE IN U.S.A.

The Flagg-Air 340HP does not carry the NSF seal. Check local and state regulations for approval in your area.

FEATURES:

- Motor is fully enclosed
- Prewired
- 7-amp mini-breaker
- Powder coated steel brackets w/ rubber vibration restrictors
- Stainless steel shaft w/ bronze counter shaft
- High impact plastic suds diffuser & aspirator tip

\$350.00
2-YEAR WARRANTY

ALARMS • TIMERS CONTROLS



P101-FA-2
24-HOUR
TIMER

/w mini-breaker & warning light increment setting 15 minutes

ROTARY VANE COMPRESSORS



GAST

Models:
0523 (4.5 cfm) ... \$335.00
1023 (10 cfm) ... \$496.00

BULLET™ HIGH HEAD FILTERED EFFLUENT PUMPS



18-Month Warranty

All stainless steel construction built for years of dependable service

- 1/2 HP, 10 amp motor
- Prewired
- 15-foot power cord

Models:
BP12 (12 gpm) ... \$280.00
BP20 (20 gpm) ... \$272.00

REGENERATIVE BLOWERS



GAST

Model: R3105-12

LIFT STATION PUMPS



Liberty, Hydromatic, Zoeller, ABS, & Meyer

DIAPHRAGM AIR PUMPS



SEPH

Models:
EL 60 • EL 80
EL 100 • EL 120

PISTON AIR PUMPS



MEDO

Models:
LA-60 • LA-90B
LA-100 • LA-120

Hey, Good Lookin'

With advances in the quality of truck and machine finishes, what's the best way to protect your equipment investment from a harsh working environment?

By Ed Wodalski

Keeping your equipment clean can extend its life and enhance resale value. But how far do you need to go? With today's high-tech finishes, is a weekly washdown enough to protect your investment, or will you still benefit from getting out the wax or polish and giving it a little elbow grease?

Brian Baker, owner of B. Baker Construction in Noblesville, Ind., believes in keeping his equipment clean. He repaints machines that begin to show wear and occasionally will use wax on the finish.

"If I see something that's starting to get a lot of weather to it, I fix it with some wax or clean it," he says. "But typically I don't use wax. If it gets in bad condition, we strip that machine in the wintertime and repaint it. We degrease everything," says Baker, whose fleet includes a John Deere bulldozer, three Bobcats, two Case excavators and a backhoe. "The dozer is a 2000 and it's been repainted once already – all decals, all the stickers go back on it. We have a brand new machine when I get done."

Baker also has a dump truck, flatbed and four-wheel-drive Dodge 5500 service truck, which he might wash five times a week and occasionally waxes. Baker uses a soft-bristle brush and bucket of warm car wash liquid. "If you keep it pretty clean, it stays pretty clean," he says. "If you never wash it, it takes forever to get it clean."



One of the best tips for maintaining a finish is simply to keep it clean. Ditch Witch offers Dakota Shine to restore faded surfaces, either steel or fiberglass, as shown in these before and after photos. Older equipment can be repainted and scratches should be touched up to prevent corrosion. (Photos courtesy Ditch Witch)

The liquid wash and wax Baker uses on his trucks is the same choice for his prized 1969 Plymouth Barracuda convertible and 1972 SS Chevy El Camino muscle cars, which get waxed considerably more often than his trucks.

IS WAX NECESSARY?

Kevin Hershberger, senior market professional for backhoe loaders at Caterpillar, says the latest generation of water-based e-coat paints is designed to meet the 1,000-hour salt spray performance standard. "In general, wax will not hurt but will not significantly improve the finish quality or life," he says. "Today's finishes from cars to Cat machines are significantly improved compared to technology available just 10 years ago. That improvement is delivered through improved pretreatment and final paint."

Steve Seabolt, Ditch Witch product manager-CTS & Service parts, says one of the best tips for maintaining a machine's surfaces is simply to keep it clean. "Abrasives left on the surface will scratch paint when mechanically impacted. Dirt, sand and other soils will scratch the finish. Leaving these soils on equipment also holds moisture against the paint and could hasten corrosion if that soil is acidic or caustic."

What's a clay bar, and how does it work?

Introduced in the 1990s, detailing clay (available in a single 4-ounce bar) is designed to safely remove above-surface bonded contaminants, enabling wax or sealant to better adhere to paint.

To use, remove the clay bar from its wrapper and tear into two pieces. You can store unused clay in the plastic container it came in or a resealable sandwich bag. Knead the clay into a round, pancake-like patty. It should be large enough to cover the palm of your hand. Spray a clay lubricant onto the patty and section of paint (approximately 16 to 20 inches) you want to clean. Rub the clay over the paint until it glides effortlessly. Wipe off excess residue from the finished surface with a microfiber towel until dry before moving on to a new section.



A simple washing can help preserve the finish on your heavy equipment and enhance its resale value. (Photo courtesy Caterpillar Inc.)

“The two main functions of any coating are sunlight protection — how long it’s going to maintain its gloss and its color — and corrosion protection. Most of this equipment spends its entire life outside, and in some cases in some very corrosive environments, such as equipment used to apply road salt.”

John Valasco

Seabolt says older machines can be repainted by a local dealer, or revitalized through the use of Dakota Shine, designed to restore faded surfaces (steel, fiberglass) on Ditch Witch and other equipment.

FINISHES VARY

John Valasco, global account manager for PPG Industries, says there’s a distinct difference between the paint used on heavy equipment and the clear-coat applied to cars and trucks. Heavy equipment manufacturers use two-component liquid urethane technology for the top coat and epoxy or urethane primer or some type of hybrid technology, a cross between epoxy and polyester.

“It’s pretty different from automotive coatings, which, for the most part, are all liquid-based,” he says. Many equipment components also are powder coated. “There is no need for waxing or polishing these coatings,” Valasco says. “It’s not going to provide any real benefit to the end-user. The two main functions of any coating are sunlight protection – how long it’s going to maintain its gloss and its color – and corrosion protection. Most of this equipment spends its entire life outside, and in some cases in some very corrosive environments, such as equipment used to apply road salt.”

His recommendation: Just wash it down, but be careful when using a pressure washer when removing tough grease and mud. “There are some cases where it will peel paint away or the top coat from the primer,” he says.

GO LIGHTLY

“What we recommend, from a normal cleaning standpoint, is that the pressure wash is not greater than what your car would see in a typical car wash [between 1,200 and 1,400 psi] and water temperature less than 125 degrees F.” Valasco also recommends that the spray wand be no closer than 24 inches from the part being cleaned. Large chunks of grease or thick organic material should be wiped, not scraped, off before using a pressure washer.

Valasco says while the lifespan of heavy equipment finishes depends on OEM specifications, the typical target for color change and gloss is two to four years for parts that are not ground-engaging. Depending on how the equipment is used and the environment, Valasco suggests repainting when the machine begins to show wear.

“If you let scratches go on too long, you’re going to degrade the metal itself, and you want to prevent that and make the unit last as long as possible,” he says.

When it comes to extreme dirt and grease removal, Mike Baty, president of Crescent Chemical Co., offers Spatter-Cote Armor-Xtra protection. The product is a mixture of corrosion inhibitors and nonstick polymers applied to equipment surfaces. Originally designed to keep dried concrete from sticking to cement trucks, the water-based coating is sprayed on and lasts up to two weeks. “It’s not a wax, but it saves on labor,” he says.

SHOWROOM FINISH

Of course, if you’d like a show car finish for your work truck, Mike Phillips, author of *The Complete Guide To A Show Car Shine* and director of training at Autogeek.net, says you need to wash, clay and wax.

While a nonwax finish might be a good sales pitch, today’s clear-coat car and truck finishes (generally found on vehicles built since the mid-1990s) need to be washed and waxed, he says.

“The clear [coat] is paint without pigment; it’s still paint. You still have to wash it, clean it, clay it, polish it, protect it – just like paint on a 1952 Chevy.” □

Onsite design and installation updates a long time coming in rural Ohio

By Doug Day and Sharon Verbeten

Proposed rule changes for the design and installation of septic systems represent the first update to the standards in 35 years in many areas of rural Ohio. It is estimated that one-fourth of Ohio's 88 counties have not made any significant updates since the rules were first adopted. About 31 percent of systems statewide need to be repaired or replaced, according to a survey conducted by the Ohio Department of Health.

The state department asked all local health districts and departments to identify the number of household sewage treatment systems – septic tanks and pretreatment systems – and determine how many of those were failing. Failure rates were much higher in the northern and central counties than those reported from the southern portion of the state. The new rules would

not apply to existing systems in good working order. The proposal is available for review at www.odh.ohio.gov/HomeSewageRules.

Maryland

A coalition of rural counties in Maryland claims the state's septic systems regulations have more to do with controlling development in rural counties than with improving water quality in the Chesapeake Bay. The seven counties agree about the importance of improving water quality, but don't like the way the state is trying to accomplish that goal. The coalition says septic system improvements expected to cost \$3.7 billion will reduce nitrogen in the Bay by only 620 tons per year, while the stormwater management pond at the Conowingo Dam dumped an estimated 115,910 tons when it overflowed in a tropical storm in 2011. A spokesman says the most money being spent on nitrogen reduction is for septic systems that contribute the least nitrogen to the Chesapeake Bay compared with stormwater, wastewater treatment plants and agriculture. The state has estimated septic systems contribute about 8 percent of the Chesapeake Bay's total nitrogen.

Alaska

The owner of a Fairbanks pumping company has been ordered to eliminate odor coming from lagoons filled with septage. Robert Riddle, of Fairbanks Pumping and Thawing, began storing the septage in 2005 with intentions to use it as farm fertilizer. Since 2010, he has accepted another 2.5 million gallons of septage from another company, according to court documents.

The developer of a nearby property filed suit claiming the smell drove neighbors indoors. Riddle claimed he was covered by the state's Right-To-Farm Act, but the court disagreed, saying he doesn't qualify as a commercial farm because he doesn't sell any farm products.

Oregon

It's been 10 years since new septic tanks were allowed in the city of Medford in southwest Oregon. The city council has now lifted that ban, allowing septic tanks if the property is located more than 300 feet from a sewer line. In 2003, the council voted to prohibit septic systems in the city, turning down a Public Works recommendation to include the distance exception. □

T&T Tools, Inc.
800.521.6893

Probes ▼ Hooks

Hooks...

- ★ Heat treat for long life
- ★ Manhole Cover Hooks
- ★ Septic Tank Lid Hooks
- ★ Many styles available
- ★ "T" handles for two hands or compact "D" handles

Probes...

- ★ Insulated, Standard and Specialty
- ★ Metal shafts: 3/8 round or hex
- ★ Replaceable hardened tips
- ★ Optional "slide" available to make your probe a mini-slide hammer

Call for a FREE Catalog
www.MightyProbe.com
Email: sales@tandttools.com Fax: 800.521.3260

www.onsiteinstaller.com

Simple • High-Performance • Wastewater System

Eljen GSF...Your Affordable Treatment Solution For Today's Wastewater Challenges!

- Product Performance Compliant with NSF/ANSI Standard 40 Protocol.
- Dual filtration process provides the performance you require.
- Non-mechanical design means little to no maintenance.
- The most treatment area per foot in the industry.



eljen
CORPORATION

Innovative Environmental Products and Solutions Since 1970

1-800-444-1359

eljen.com

ONE PUMP DOES IT ALL.



Get top performance. Avoid maintenance headaches
with lower flow, higher head than most centrifugal pumps.

- Durable cast iron construction
- Move filtered effluent from the home
- Dose low pressure piping system
- Automatic or non-automatic options available
- Less likely to cause agitation or sludge disruption

YOUR PEACE OF MIND IS OUR TOP PRIORITY.®



1-800-928-7867

www.clarusenvironmental.com



CLARUS
ENVIRONMENTAL

ABOUT THE AUTHOR

Bob Mayer is President of American Manufacturing Co. and serves as NOWRA's Secretary/Treasurer. The National Onsite Wastewater Recycling Association is dedicated to representing and educating all segments of the onsite/ decentralized industry. For more information or to join, visit www.nowra.org or call 800/966-2942.

Onsite system design standards improve treatment performance nationwide

By Bob Mayer

Unlike in the past, design practices vary widely between states. When I started 40 years ago, environment health specialists (then sanitarians) were responsible for the design of nearly every system. They did bring engineers in to design some more complex systems, but still under their supervision.

Much has changed. The science and technology of onsite system design has grown considerably. Onsite systems are being installed on much more challenging sites, system flows of tens of thousands of gallons per day are more common, and more of these systems are being designed by engineers and designers from the private sector. For these reasons and more, the National Onsite Wastewater Recycling Association is developing training materials and a standard of practice for decentralized wastewater systems.

Training materials have been developed by many industry groups, including the National Association of Wastewater Technicians (NAWT), the Consortium of Institutes for Decentralized Wastewater Treatment (CIDWT), the National Environmental Health Association (NEHA), NOWRA and universities. The U.S. Environmental Protection Agency has funded training centers, operator training, installer training, work on a model code and more. The only missing part seems to be designer training. To address this, in 2011, then-NOWRA President Richard Otis formed a task force to develop designer training.

At NOWRA's 2013 annual conference in Nashville, the NOWRA Standard of Practice for Decentralized Wastewater Treatment Soil-Based Treatment System Selection and Design was presented. This standard was

adopted at the NOWRA October board meeting and was also presented at the Virginia Onsite Wastewater Recycling Association (VOWRA) annual conference in Roanoke, Va. Participants agreed with the elements of design and we discussed the widely varying authorities and responsibilities of designers in various states.

While the discussion highlighted the various approaches to licensing and training designers, everyone agreed that there is a need for both good design and for training, including engineering designers. We also received good comments on the Standards of Practice, including some elements that will make good additions to the standards.

Clearly, good design makes for good installations and good systems. The national training programs for operators and installers have made for more consistent practices. Consistency from state to state has also improved due to the extensive use of third-party-tested advanced pre-engineered systems.

Currently, NOWRA has developed 13 modules for designer training. The training describes the Standard of Practice elements applicable for each design. These modules were developed for design training NOWRA will conduct for the Maryland Association of Onsite Wastewater Professionals (MOWPA) this spring. The advanced designs covered will include mounds, at-grade, low-pressure distribution (LPD) and drip.

NOWRA's goal is not to turn designers into engineers. Rather, it is to make sure designs of onsite systems – especially more complex designs – are done properly and that nonengineering practitioners – designers, regulators and others – have a better understanding of requirements for each design. Our approach combines classroom training with examples in the field and is fairly mathematics intensive. Readers can review the Standard of Practice and see course module summaries developed to date at www.nowra.org.

Again, good design makes for good installations and the more knowledge we can feed new designers, the easier life will be for installers and future operators. □

SP1
SEPTIC PRODUCTS INC

The Most Complete Line of
SYSTEM ALARMS
FLOAT SWITCHES
ON-SITE ACCESSORIES
CONTROL PANELS

Call Today
419-282-5933

sales@SepticProducts.com SepticProducts.com

Get Email News Alerts for **onsite installer**

www.onsiteinstaller.com/alerts

ADS adds fourth production line

Advanced Drainage Systems added a fourth manufacturing line to its Saint-Germain-de-Grantham, Quebec, Can., plant to produce large diameter, open-profile pipe from 900 to 1,500 mm. The facility is certified to produce N-12 corrugated HDPE pipe diameter from 100 to 900 mm with minimum pipe stiffness. It also is capable of making the company's SaniTite HP polypropylene pipe.

Hyundai sends aid to Philippines

Hyundai Heavy Industries Group, Hyundai Construction Equipment's parent company, donated \$200,000 via the Korean Red Cross in the wake of Typhoon Haiyan, which struck the Philippines. The company also dispatched a 21-ton-class excavator, backhoe loader and operators to the area to assist in recovery efforts.

Grundfos celebrates 40th anniversary

Grundfos celebrated 40 years of operations in the United States with the unveiling of a commemorative sculpture at its facility in Fresno, Calif., in November. The Denmark-based pump manufacturer expanded to the U.S. in 1973, growing to more than 1,300 employees in five locations nationwide.

Thompson Pump relocates Maryland branch

Thompson Pump and Manufacturing Co. relocated its Baltimore-Washington branch to a larger facility at 711 Pittman Road, Baltimore. The facility, located on 4.6 acres, provides sales, parts and service to Pennsylvania, Maryland, Virginia, Washington, D.C., and portions of New York and New Jersey.

Topp Industries names managers

Topp Industries appointed J.J. Lang to manage U.S. and Canadian wholesale business and named Tim Merkel outside sales manager, responsible for OEM and engineered sales accounts.

Franklin Equipment opens Ohio branch

Franklin Equipment opened a fourth Ohio location in Newcomerstown. The facility will provide equipment rental for construction and landscaping companies and the oil and gas industry.

WesTech facility receives ISO certification

WesTech Engineering's Iowa office received ISO 9001:2008 certification. The facility oversees the company's general filter and microfloc product lines.

Kohler creates story-sharing blog

Kohler created a story-sharing blog, Believing In Better (www.believe.kohler.com), to highlight the successes in sustainability achieved by its associates, channel partners and consumers. □

AERATORS

We sell Flagg-Air 340, Secoh, Gast and Medo Linear, FPZ and Gast Regenerative, Thomas and Gast Rotary Vane aerators, rebuild kits and alarms at wholesale prices. Septic Services, Inc. www.septicserv.com. 1-800-536-5564 (IM)

BUSINESSES

Florida state septic license available to qualify your company. Reasonable terms. Contact Jake 352-200-1522. (PBM)

DRAINFIELD RESTORATION

Soil Shaker 2000. Universal skid steer attachment for drainfield restoration. Buy factory direct. \$6,250. Check us out on YouTube or call 320-293-6644. (PBM)

Terralift: Huge discounts on Terralift Machines. Call Dick Crane or John Vanzandt at 800-223-2256 or 888-298-4272. (PBM)

HAND TOOLS

CrustBusters - Portable, lightweight machine guaranteed to mix up septic tanks and grease traps! Save time and money! www.crustbusters.com, 1-888-878-2296. (IM)

POSITIONS AVAILABLE

USG is a growing Pennsylvania-based company seeking CCTV, grouting, jet/vac, CIPP, HDD, lateral rehab and manhole rehabilitation technicians and foremen. Applicants should have a minimum of 1 year experience in the industry. We are an EOE offering great pay, relocation subsidy and steady work. Send resumes to HR@usginc.net, Fax: 717-737-6093 or USG HR Department; 1304 Slate Hill Road, Camp Hill, PA 17011 (P04)

PUMPS

Hydromatic, Zoeller, Liberty, ABS, Myers, grinder and effluent pumps. Lift station packages and high water alarms are also available. Septic Services, Inc. www.septicserv.com, 1-800-536-5564 (IM)

SOLD

Sell your equipment in *Onsite Installer* classifieds

Reach over 21,000 potential buyers each month when you list your equipment in the classified section. Plus, your listing is placed automatically online at the *Onsite Installer* website. That's two ways to move your equipment out of the parking lot!

Why wait?

Go to OnsiteInstallermonthly.com/classifieds/place_ad



Scan the code with your smartphone.

Seal it Tight! Seal it Easy! Seal it Fast!

Are you tired of using risers that are too tall or too short for the job you are completing?

Plastic riser pipe will give an exact height each time. Try our system and you will never have to carry concrete pipe and lids again. Save time by not having to assemble multiple sections.

- Easy 10 minute installation!
- Prevent ground water infiltration and save money at the same time!
- Secure fit for all systems!
- Made & sold by septic installers!

BrenLin Company, Inc
Manufacturers of Seal-R™ Products
888-606-1998 • www.seal-r.com

Seal-R™ Sizes:
12", 15", 18",
24", 30",
36", 42"

↑ RISER: Dual-wall plastic culvert pipe.

↑ Inner safety lid.

THANKS FOR VISITING US

find us on | facebook

www.facebook.com/OnsiteInstaller

Serving the Industry

Visit your state and provincial trade associations

By Doug Day

Alabama

Alabama Onsite Wastewater Association;
www.aowainfo.org;
334/396-3434

Arizona

Arizona Onsite Wastewater Recycling Association;
www.azowra.org;
928/443-0333

Arkansas

Arkansas Onsite Wastewater Association;
www.arkowa.com

California

California Onsite Wastewater Association;
www.cowa.org;
530/513-6658

Colorado

Colorado Professionals in Onsite Wastewater;
www.cpow.net;
720/626-8989

Connecticut

Connecticut Onsite Wastewater Recycling Association;
www.cowra-online.org;
860/267-1057

Delaware

Delaware On-Site Wastewater Recycling Association;
www.dowra.org

Florida

Florida Onsite Wastewater Association;
www.fowaonsite.com;
321/363-1590

Georgia

Georgia Onsite Wastewater Association;
www.onsitewastewater.org;
678/646-0379

Georgia F.O.G. Alliance;
www.georgiafog.com

Idaho

Onsite Wastewater Association of Idaho;
www.owaidaho.org;
208/664-2133

Illinois

Onsite Wastewater Professionals of Illinois;
www.owpi.net

Indiana

Indiana Onsite Waste Water Professionals Association;
www.iowpa.org;
317/889-2382

Iowa

Iowa Onsite Waste Water Association;
www.iowwa.com;
515/225-1051

Kansas

Kansas Small Flows Association;
www.ksfa.org;
913/594-1472

Kentucky

Kentucky Onsite Wastewater Association;
www.kentuckyonsite.org;
855/818-5692

Maine

Maine Association Of Site Evaluators;
www.maine.com

Maine Association of Professional Soil Scientists;
www.mapss.org

Maryland

Maryland Onsite Wastewater Professionals Association;
www.mowpa.org;
443/570-2029

Michigan

Michigan Onsite Wastewater Recycling Association;
www.mowra.org

Michigan Septic Tank Association;
www.msta.biz;
989/808-8648

Minnesota

Minnesota Onsite Wastewater Association;
www.mowa-mn.com;
888/810-4178

Missouri

Missouri Smallflows Organization;
www.mosmallflows.org;
417/739-4100

Nebraska

Nebraska On-site Waste Water Association;
www.nowwa.org;
402/476-0162

New Hampshire

New Hampshire Association of Septage Haulers;
www.nhash.com;
603/831-8670

Granite State Designers and Installers Association;
www.gsdia.org;
603/228-1231

New Mexico

Professional Onsite Wastewater Reuse Association of New Mexico;
www.powranm.org;
505/989-7676

North Carolina

North Carolina Septic Tank Association;
www.ncsta.net;
336/416-3564

North Carolina Portable Toilet Group;
www.ncportabletoiletgroup.org;
252/249-1097

North Carolina Pumper Group;
www.ncpumpergroup.org;
252/249-1097

Ohio

Ohio Onsite Wastewater Association;
www.ohioonsite.org;
866/843-4429

Oregon

Oregon Onsite Wastewater Association;
www.o2wa.org;
541/389-6692

Pennsylvania
Pennsylvania Association of
Sewage Enforcement Officers;
www.pa-seo.org;
717/761-8648

Pennsylvania Onsite
Wastewater Recycling
Association;
www.powra.org

Pennsylvania Septage
Management Association;
www.psmna.net;
717/763-7762

Tennessee
Tennessee Onsite
Wastewater Association;
www.tnonsite.org

Texas
Texas On-Site
Wastewater Association;
www.txowa.org;
888/398-7188

Virginia
Virginia Onsite Wastewater
Recycling Association;
www.vowra.org;
540/377-9830

Washington
Washington On-Site
Sewage Association;
www.wossa.org;
253/770-6594

Wisconsin
Wisconsin Onsite Water
Recycling Association;
www.wowra.com;
608/441-1436

Wisconsin Liquid Waste
Carriers Association;
www.wlwca.com;
608/441-1436

NATIONAL
Water Environment Federation;
www.wef.org;
800/666-0206

National Onsite Wastewater
Recycling Association;
www.nowra.org;
800/966-2942

National Association of
Wastewater Technicians;
www.nawt.org;
800/236-6298

CANADA
Alberta

Alberta Onsite Wastewater
Management Association;
www.aowma.com;
877/489-7471

British Columbia

WCOWMA Onsite Wastewater
Management of B.C.;
www.wcowma-bc.com;
877/489-7471

Manitoba

Manitoba Onsite Wastewater
Management Association;
www.mowma.org;
877/489-7471

New Brunswick

New Brunswick Association of
Onsite Wastewater Professionals;
www.nbaowp.ca;
506/455-5477

Nova Scotia

Waste Water Nova Scotia;
www.wwns.ca;
902/246-2131

Ontario

Ontario Onsite
Wastewater Association;
www.oowa.org;
855/905-6692

Ontario Association of Sewage
Industry Services;
www.oasisontario.on.ca;
877/202-0082

Saskatchewan

Saskatchewan Onsite Wastewater
Management Association;
www.sowma.ca;
877/489-7471

Canadian Regional

Western Canada Onsite
Wastewater Management
Association;
www.wcowma.com;
877/489-7471

Featured In An Article?

We provide reprint options



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

POSTERS
Starting At
\$35

**LASER
REPRINTS**
Starting At
\$10

**ELECTRONIC
REPRINTS**
Starting At
\$25



A Way to Do It Better

By Scottie Dayton | Cover Story | March 2013

0 Comments | View in E-Zine | **Order Reprints** | Share

Order through our website

www.onsiteinstaller.com

Pumps

By Craig Mandli

Pumps can help perform a variety of tasks as components in an onsite system, including grinding biosolids, conveying effluent or sewage, and providing aeration in a lagoon or pond. Here are several pumps designed to perform various functions in onsite systems.

EFFLUENT PUMPS

Heavy-duty effluent pump

Heavy-duty effluent pumps from Ashland Pump are available in multiple horsepower sizes for various performance requirements, and feature efficient permanent split capacitor (PSC) motors. The oil-filled pumps feature upper and lower ball bearing design and handle solids up to 3/4 inch. They are made of heavy cast iron, with cast-iron impellers and equipped with a piggyback switch (20-foot standard cord) or in manual configurations. 855/281-6830; www.ashlandpump.com.



Effluent turbine pump

Effluent turbine pumps from Clarus Environmental are available in capacities from 11 to 85 gpm, with heads up to 500 feet. Pumps range from 1/2 to 3 hp. The 1/2 hp pumps are available in 115 or 230 volts, and are powered by Franklin Electric motors. They feature discharges of 1 1/4 inches for 11, 19 and 27 gpm models, and 2 inches for 35, 55 and 85 gpm models. Starting boxes are not required for pumps 1 1/2 hp and below, but are included with 2 and 3 hp models. They come standard with a 10-inch jacketed cord, but cord lengths up to 100 inches are available. It is recommended that all Clarus pumps are installed in a filtered STEP vault or in a pump tank receiving filtered effluent from a septic tank filter. 800/928-7867 www.clarusenvironmental.com.



Submersible cistern pump

CI Series stainless steel submersible cistern pumps from Franklin Electric are used in graywater/filtered effluent septic system applications, and pass solids up to 1/8 inch in diameter without impacting pump life. Constructed of a 304 stainless steel motor and outer shell with engineered polymer hydraulics providing corrosion resistance and abrasive handling, features include a thermoplastic discharge head to avoid breakage during installation and operation, and a removable 5-inch-wide base for secure and reliable mounting. The motor lead connection is protected with a rubber boot and secured with a stainless steel strain relief, and its bottom-suction



design allows for maximum fluid drawdown without compromising durability or pump life. Pumps are available with 115- or 230-volt, 1/2 hp single-phase motor, in flow ratings of 10, 20 and 30 gpm, and a maximum shut-off pressure of more than 100 psi. 800/269-0063; www.franklin-electric.com.

Ready-to-install pump package

Biotube ProPak packages from Orenco Systems are complete, ready-to-install pump packages. They are used for filtering and pumping effluent from single- or dual-compartment septic tanks to either gravity or pressurized discharge points, with no pump tank required. The filter cartridge filters up to two-thirds of solids, so that only liquid from the “clear zone” between the tank or basin’s scum and sludge layers is pumped. This reduces biological loading and clogging of downstream components, saving operation and maintenance costs and helping extend the lives of drainfields and other downstream components. The filter cartridge is easy to remove and clean – without pulling the pump vault. The PF-series high-head effluent pump is field serviceable and repairable, and pump controls are designed for the specific package. Multiple models are available. 800/348-9843; www.orenco.com.



High-head turbine pump

The Plus line of high-head turbine pumps from Quanics Inc. are available in 10, 20 and 30 gpm models, with head capacities of up to 250 feet. The 1/2 hp, 115-volt motors have minimum 24-hour dry run capability, and offer thermal overload protection. They are constructed of 300-grade stainless steel and engineered composite materials. The bottom intake design allows for greater drawdown and eliminates the need for flow inducer sleeves. 877/782-6427; www.quanics.net.



AERATION PUMPS

Flood-resistant aerator

The flood-resistant 700++ aerator from Jet Inc. is the only mechanical component in the company’s 1500 Series BAT Media Plant, working in tandem with the BAT Media to provide complete biological processing. The aerator shaft spins and combines fresh, outside air with the wastewater in the treatment compartment. Air travels through the aerator

and into the tank, providing oxygen for the treatment process. Foam is controlled by the foam restrictor. Operation is nearly silent. The aerator is sealed to protect it from damage by water; however it is not designed to operate under water for extended periods of time. 800/321-6960; www.jetincorp.com.

Long-life aerator

The Singulair Model 206C aerator from Norweco includes special alloy and molded plastic parts to prolong aerator life. With watertight integrity ball bearings, radial air intake openings, NEMA 6-rated waterproof electrical connections and a UL recognized fractional horsepower motor, it combines advanced electromechanical components with energy efficiency. It is UL listed and CSA certified. 800/667-9326; www.norweco.com.



Linear air pump

The STA80AL Whirlwind pump from Septic Services Inc. features an integrated audible alarm and warning light to monitor pump performance. It conforms to local codes that may require units to be equipped with an alarm system. It has a flow rate of 4.0 cfm and is capable of 2.0 psi. In addition, the unit has thicker diaphragms and an oversized shuttle helping to produce greater performance and longevity. It is easy to install and includes inside-threaded outlet pipe and a 6-foot power cord, as well as a toggle switch to test the alarm and warning light. It comes with hose and clips. 800/536-5564; www.septicserv.com/store.



SEWAGE PUMPS

Backup pumping system

Designed to deliver all the benefits of our sound-attenuated silent pumps, the ReliaPrime emergency bypass station from Gorman-Rupp Company operates on natural gas, making it quiet, efficient and environmentally friendly. It features a 6-inch Super T Series pump capable of passing a 3-inch spherical solid, and offers a soundproof, lightweight aluminum enclosure with lockable door panels that are easily removed for engine or pump maintenance. This unit is a complete backup package ready for emergency hookup in power outages, for primary pump repair and for additional pumping capacity. 419/755-1011; www.grpumps.com.



Sewage pump

S Pumps from Grundfos Pumps can be used for transferring unscreened raw sewage or water, pumping water containing sludge or pumping industrial effluent. They feature a SmartTrim impeller clearance adjustment system and SmartSeal for leakage prevention. The SmartTrim system makes it easy to adjust factory-set impeller clearance to maintain efficiency. The SmartSeal auto-coupling gasket provides a leakproof connection between the pump and the base unit of the auto-coupling system. The shaft seal is capable of rotating in either direction. When installed with separate pipework, sludge sedimentation can be avoided by back-flushing at regular intervals. 800/921-7867; www.grundfos.us.



Submersible sewage pump

ABS submersible sewage pumps from Sulzer Pumps / ABS USA use premium-efficiency IE3 motors for low operating cost and reduced carbon footprint. Long-term reliability limits the risk of overflows. A Contrablock Plus impeller provides quality rag handling. 800/525-7790; www.sulzer.com.



GRINDER PUMPS

Grinder pump

The 2 hp grinder pump from Champion Pump provides up to 133 feet TDH option. The starting components are optional, eliminating the need for expensive control panels. Also available in a three-phase system, its quick-disconnect cord is available up to 50 feet, allowing it to be replaced without disturbing the wiring in the panel and conduit. It is offered as a packaged system complete with guide rails built to specifications. 800/659-4491; www.championpump.com.



Grinder pump station

The E/One Extreme grinder pump station from Environment One Corporation provides 185 feet TDH, corrosion protection and expanded communications. It needs no preventive maintenance and is available in prepackaged wet well/drywell systems. The grinder pump station collects wastewater, grinds solids and moves the effluent through 1 1/4- to 4-inch pipe to treatment. 518/579-3068; www.eone.com.



Progressive cavity pump

The M3068.175 progressive cavity pump from Flygt – a Xylem Brand, brings a municipal-grade wastewater pump for residential use. Engineered to meet the rigors of wastewater systems, it features an impeller for optimum hydraulic efficiency and a heavy-duty cutting device that grinds solids into 1/4- by 5/8-inch particles for easy transport through small-diameter pipes, eliminating the risk of clogging. It utilizes a Griploc seal system consisting of two mechanical seals that provide double security against water intrusion. It is equipped with an air-filled motor having stators that are trickle-impregnated with resin to eliminate air pockets and allow 30 starts per hour. Its radial grinding mechanism has been used successfully in municipal pumps for more than 20 years. 704/409-9700; www.flygtus.com.



Buildup-preventing grinder pump

The 1GA and 2GA 1 1/2- and 2-inch grinder pumps from Goulds Water Technology – a Xylem Brand, are ideal for high head and pressure sewage systems in municipal, commercial or industrial applications. The cutter system is designed to reduce sewage to a fine slurry, preventing buildup. A standard feature on these pumps is the float leakage sensor (FLS), a small internal float switch used to detect the presence of water in the stator chamber. When this is activated, a monitoring relay will signal an alarm, and if desired, stop the



pump. The impeller and casing are made of cast iron and designed for high efficiency. The pumps are painted with a two-coat system to ensure superior surface protection. 866/325-4210; www.goulds.com.

Pressurized grinding system

The InviZiQ pressure sewer system uses grinding and pumping to move sewage efficiently to treatment facilities regardless of the terrain, slope, environmental sensitivity or topography. It offers a dry-well design and clean access to the system motor and other working parts. Network monitoring and control is built in. 513/226-6961; www.inviziq.com.



Residential grinder pump

The ProVore grinder pump from Liberty Pumps is designed for use in residential applications where the addition of a bathroom or other fixtures below sewer lines requires pumping. It features the same V-SliceCutter technology utilized in Omnivore Series 2 hp grinder pumps. Powered by a 1 hp motor, it is designed to operate on a standard 115- or 230-volt circuit requiring a 20-amp breaker. No special wiring is needed. Compact factory-assembled systems are available in both simplex and duplex versions. 800/543-2550; www.libertypumps.com.



Durable grinder pump

MVP Series grinder pumps from Weber Industries - Webtrol Pumps are constructed from type 304 stainless steel and cast iron. The hardened, antiwear grinding ring and cutter and recessed, cast-iron vortex impeller are designed to provide years of trouble-free service. This series features double mechanical seals, as well as potted epoxy cord seals, to prevent water intrusion into the motor, extending the life of the pump. They are available in 1 and 2 hp, with up to 100 feet TDH. 800/769-7867; www.webtrol.com. □



productnews

Gehl RT Series track loaders



RT Series radial-lift track loaders from Gehl feature Tier IV Yanmar diesel engines with 69.9 hp and 217 ft-lbs of torque on the RT175 GEN:2 and 72 hp with 217 ft-lbs of torque on the RT210. The RT175 has a rated operating capacity of 1,700 pounds,

while the RT210 has a rated operating capacity of 2,100 pounds. The RT175 weighs 8,605 pounds and the RT210 weighs 9,890 pounds. Both models deliver 10 feet 6 inches of lift height. 800/628-0491; www.gehl.com.

Stanley Vidmar 5S cabinets

5S cabinets from Stanley Vidmar are designed to fulfill lean and Kaizen storage requirements. Features include Plexiglas or solid hinged doors with metal pegboard inserts, heavy-duty lock and difficult to duplicate key system. 800/523-9462; www.stanleyvidmar.com.



Zoeller Z-Rail pump disconnect system



The Z-Rail pump disconnect system from Zoeller Co. is designed for threaded discharge submersible pumps. Rated to 250 feet TDH, the system is available in 1 1/4-inch vertical or horizontal NPT, 1 1/2-inch and 2-inch vertical. Additional versions and configurations, including nonsparking for use with Class 1 Division 1 pumps in hazardous locations are available. 800/928-7867; www.zoeller.com. □

ONSITE installer
Socially Accepted






www.facebook.com/OnsiteInstaller
www.twitter.com/OnsiteInstaller
www.plus.google.com
www.youtube.com/OnsiteInstaller

ONSITE installer
It's your magazine. Tell your story.

At Onsite Installer, we're looking for companies with an interesting story to tell. If you'd like to share your story, send us a note at editor@onsiteinstaller.com.

ALITA **LINEAR AIR PUMP**



- ☑ Full range of efficient and reliable aeration pumps for Aerobic Treatment Unit
- ☑ Low energy cost and quiet operation
- ☑ 3 Years Manufacturer Limited Warranty
- ☑ Parts and repair available for variety of brands of linear air pumps

Call **626-962-2116** for more information

ALITA INDUSTRIES, INC.
P.O. Box 660923, Arcadia, CA 91066-0923, USA
phone: (626) 962-2116 fax: (626) 962-2177
on-line: www.alita.com e-mail: sales@alita.com


UL certified in compliance to USA and Canada safety standards for outdoor air compressors

ALDERON Industries
Leading Edge Control Products

Floats & Sensors, Alarms, Power Posts, Controls, Custom Controls



Phone: 218-483-3034 / www.alderonind.com

DALMARAY
Concrete Products, Inc.
888-222-4541
 Janesville, WI
Putting Quality In The Ground Since 1957!

- Septic Tanks, Holding Tanks, Aeration Tanks and Grease Traps
- Tank Sizes from 46 Gallon to 10000 Gallon
- AASTHO H520 Rated Tanks
- Full Line of Accessories
- Superior Quality
- Full Service National Delivery Fleet
- Vacuum Tested, Engineered Designs

NOWRA **NPCA**
 National Onsite Wastewater Recycling Association MEMBER

www.dalmarayconcreteproducts.com



Pagoda Vent™
 superior septic vents

The passive treatment unit every leach field and concrete tank needs!

Quality Craftsmanship
 Heights 1' to 4'
 Built in the USA
 Fast 'n' easy to install
 Blends in landscape
 Optional Odor Filter

pagodavent.com
 Follow us on Facebook
 Customer Service 888-864-1468
 Pagoda Vent Co. PO Box 123 Kittery Point, Maine

Wolverine Brand
 Septic Vent Filters
 We Stop the Stink!



Patent #US 8,273,162

- More Carbon than other filters
- Patented Cross Flow Design Wicks Away Moisture

IndustrialOdorControl.com
 866-NO-STINK (667-8465)
 973-846-7817

Simple Solutions DISTRIBUTING LLC

Truck For Sale:
 2004 FL70 Freightliner,
 Cat Diesel Eng,
 6 speed, A/B, A/C,
 new 16' set bed,
\$34,000
 For Photo contact Tommy

Custom Made To Your Specs Truck Beds & Forms

1500 & 1000 Gal.
 2 Compt.
 Septic Tank Forms



Septic Tank Delivery Beds

Call Tommy for a quote!

THE SHADDIX COMPANY
256-338-4987 or 256-737-0051
 Ask about our used equipment

Reps & Distributors Wanted

THE DIRTY BIRD™
 Septic Vent Concealer



Converts your ugly septic vent into an attractive bird bath and controls odor too!

Installs in 5 Easy Steps!

866.968.9668 781.793.9334
 Made in the USA www.thedirtybird.com

The Most Durable & Economical
Septic Lid

Now Offering 18" & 24" Custom Lids

Durable & Lightweight Polymer
 WILL NOT Crack Like Concrete!
 Easier to Handle & Transport
 12", 18" & 24" Available
 Easy Installation
 Optional Sand Filled

Cost Effective 6 Pack Shipping

800.868.0973

Jet®
 Wastewater Treatment Solutions

Founded on Innovation.
 Anchored by Service.®

1.800.321.6960
www.jetincorp.com
 email@jetincorp.com

Pumper & Cleaner
PROFIT
 Series

3 DAYS OF HANDS-ON BUSINESS BUILDING AND NETWORKING
 MARCH 31-APRIL 2, 2014 AT THE GAYLORD TEXAN IN DALLAS

LIMITED TO ONLY 200 SEATS - REGISTER NOW!
REGISTER BEFORE MARCH 1 AND SAVE \$100! - ONLY \$299/PERSON

SESSIONS WILL COVER:
 UNDERSTANDING EXPENSES • PRICING YOUR SERVICES AND PRODUCTS
 INCREASING PROFITS • INTERNET AND SOCIAL MEDIA • MARKETING

WWW.PUMPERSHOW.COM/PCPS • 866-933-2653

POLYLOK

Innovations in Precast, Drainage & Wastewater Products



Zabel®
A Division of Polylok Inc.



PL-68 PL-122 PL-525/625 GF-10 12x20 4x22 4x18 Filter Alarms & Switches



Effluent Filters / Filter Alarms & Switches



- Easy installation
- No gluing necessary
- Centers filter or tee under riser



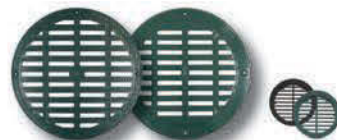
6" Tall Risers 12" Tall Risers

Extend & Lok (3", 4" & 6")

Tank Risers (12", 20" & 24")



Covers: 12", 15", 18", 20", 24" & 30"



Grates: 3", 4", 6", 12", 15", 18", 20" & 24"

Covers & Grates (for Polylok Risers / D-Boxes & Corrugated Pipe)



- One Hydro Shield fits 3 pipe sizes: 1", 1-1/4" & 1-1/2" or 1", 1-1/2" & 2"
- Easy to install, just clip in.
- 360 degree equal distribution

Hydro Shield



- Fits securely onto either 3/4" - 1" pipe or 1-1/2" - 2" pipe
- Constructed of engineered resin
- Slotted design prevents plugging
- Can be installed facing up or down
- 360 degree equal flow distribution with impeller

Orifice Diffuser



Poly-Air

6", 4", 3", 2" & 1-1/2"

6" supplied with 5 lbs. of Activated Carbon!



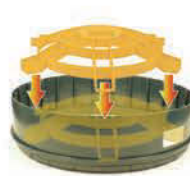
Activated Carbon Vented Covers
18", 20" & 24"

Activated Carbon Roof Vents & Vented Covers

WE HAVE IT ALL!

New Products

For: Polylok Risers / PVC Ribbed / HDPE Corrugated / Concrete



12", 20" & 24" Safety Screens



Universal Kid Catcher

Help save a child or pet's life with our safety devices!



20" & 24" Lid-Lok Safety Device



20" & 24" Riser Pan



Distribution Boxes



Cover Insulation



Pumps & Air Pumps



STEP Systems



High Pressure Filter



U.V. Disinfection Unit

1-800-701-3946 / www.polylok.com

Your One Stop Shop for Superior Onsite Wastewater Products.