

ONSITE installer™

PROMOTING WASTEWATER TREATMENT QUALITY AND PROFESSIONAL EXCELLENCE

www.onsiteinstaller.com

County Line
Septic LLC

Willington, CT

BASIC TRAINING:
Reading soil
survey data p. 20

SNAPSHOT:
Preach proper
maintenance
p. 26

THE TRIPLE THREAT

The owners of Connecticut's County Line Septic grew by catering to every aspect of septic service, from installs and repairs to real estate inspections to ongoing pumping p. 10

SYSTEM PROFILE
Mound in a Box
p. 22



PRODUCT FOCUS
System Repair/Drainfield Rejuvenation p. 30

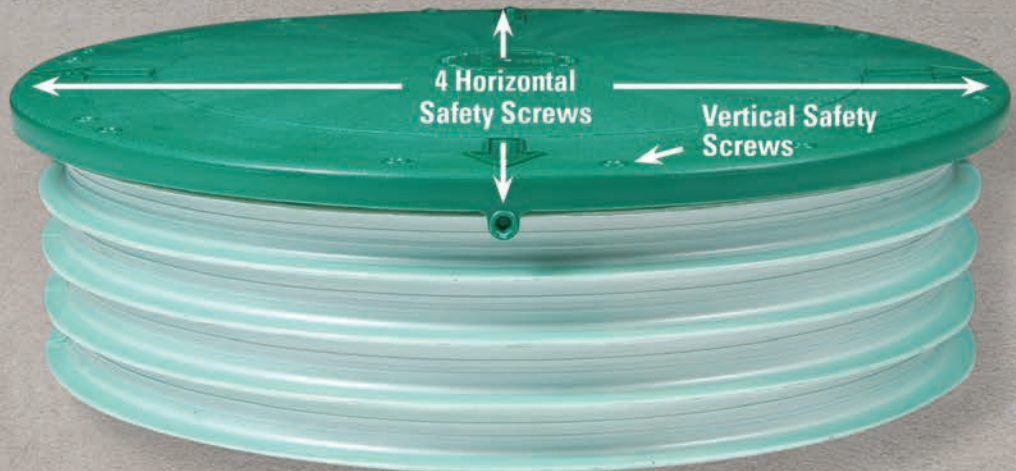


24" HEAVY DUTY MULTI-PURPOSE FLAT RISER LID

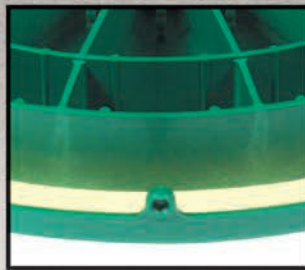
Fits most commercially available:

- 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.



Concrete Keepers™
 Holds up to 70 lbs of Concrete for Added Safety.



Tuf-Tite® Riser
 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.



NSF®
 800 GPD
 ANS/NSF
 Standard 46

NSF®
 COMPONENT
 ANS/NSF
 Standard 46

NSF®
 COMPONENT
 ANS/NSF
 Standard 46

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®
 COMPONENT
 ANS/NSF
 Standard 46

NSF®
 1500 GPD
 ANS/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
- Fits 4" Sch. 40 and SDR-35 pipe
- Simple to install
- **May also be used as Outlet Tee with Solids Deflector**

S.T.E.P. Right This Way!

 **ECOFILTER**
Pump Vault

Engineered pump system designed for
S.T.E.P. collection wastewater systems.

Applications for
Residential • Community • Commercial

FEATURES INCLUDE:

- Installs quickly in new or existing tanks
- Easy access design allows filter cartridge removal without pulling the pump or vault; simplifies filter inspection and maintenance
- Removes a significant amount of suspended solids
- Accommodates simplex or duplex configuration
- Easily adjustable float assembly
- Sturdy, molded polyethylene construction ensure long life



Infiltrator Water Technologies Product Line



(800) 221-4436 • www.infiltratorwater.com • info@infiltratorwater.com



INSTALLER PROFILE:

The Triple Threat
By Ken Wysocky

ON THE COVER:

County Line Septic owners Mike Norcross, left, and Chris Sutyla rely on diversified wastewater services to help customers around Willington, Connecticut. The pair are shown with a Peterbilt 388 tri-axle dump truck with a Beau-Roc dumpbody. (Photo by Scott Eisen)

- 6 Editor's Notebook:**
She Paid for Sewer Service For 14 Years ... Then Found Her Septic Tank
Strange story of North Carolina renter shows you can't tell the difference between sewer and septic — until something goes wrong.
By Jim Kneiszel
- 8 @onsiteinstaller.com**
Be sure to check out our exclusive online content.
- 18 Rules and Regs:**
Massachusetts may require nitrogen technology for all of Cape Cod
By David Steinkraus
- 20 Basic Training:**
How Should You Use Soil Survey Data In the Field?
You've gone online and checked the soil characteristics of your site. Now walk the land and create the appropriate treatment system.
By Jim Anderson and Dave Gustafson
- 22 System Profile:**
Boxed In
A system using pretreatment in an elevated mound provides a solution for a home on a small lakeside lot.
By Scottie Dayton
- 26 Snapshot:**
Let's Teach How to Extend the Life of Onsite Systems
Tell homeowners about proper maintenance — and preach getting rid of garbage disposals.
- 30 Product Focus:**
System Repair/Drainfield Rejuvenation
By Craig Mandli
- 34 Case Studies:**
System Repair/Drainfield Rejuvenation
By Craig Mandli
- 36 Associations List**
- 38 Product Spotlight:**
Chamber system is an answer to customer demand.
By Tim Dobbins

Coming Next Month

ISSUE FOCUS: System Maintenance, Inspection and Installation Tool

Basic Training: Recirculating media filters

Snapshot: Visit Missouri

ONSITE installer™

Published monthly by

 COLE publishing

P.O. Box 220,
Three Lakes, WI 54562

Call toll free 800-257-7222;
7:30 a.m.-5 p.m. Central time, Mon.-Fri.

Website: www.onsiteinstaller.com

Email: info@onsiteinstaller.com • Fax: 715-350-8456

SUBSCRIPTIONS

A one-year (12 issue) subscription to *Onsite Installer™* in the United States, Canada or Mexico are free to qualified subscribers. A qualified subscriber is any individual or company in the United States, Canada or Mexico 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, Discover and American Express 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 Holly at holly.gensler@colepublishing.com.

CLASSIFIED ADVERTISING

Submit classified ads **ONLINE** at www.onsiteinstaller.com/classifieds/place_ad. 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 715-350-8456 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 (715-350-8447) or email jeff.lane@colepublishing.com. To order back issues, call Holly at 800-257-7222 (715-350-8424) or email holly.gensler@colepublishing.com.

CONTROLLED CIRCULATION: 18,500 per month

This figure includes both U.S. and International distribution.

© Copyright 2022 COLE Publishing Inc.

No part may be reproduced without permission of the publisher.



www.facebook.com/OnsiteInstaller



www.twitter.com/OnsiteInstaller



www.youtube.com/OnsiteInstaller



www.linkedin.com/company/onsite-installer-magazine

Combined Treatment and Dispersal

ADVANCED
ENVIROSEPTIC™
Passive Onsite Wastewater Treatment Systems



MADE IN USA

- Treats and disperses wastewater in the same footprint.
- No electricity, replacement media or maintenance required.
- Flexible configurations for sloped or curved sites.











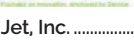
presbyenvironmental.com • info@presbyeco.com • (800) 473-5298









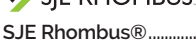
An Infiltrator Water Technologies Company








ADVERTISER INDEX

October 2022

	Alita Industries, Inc.	29
	BioMicrobics, Inc.	8
	BIOROCK.....	17
	BrenLin Company, Inc.	29
	Crest Precast, Inc.....	19
	Eljen Corporation.....	39
	Fuji Clean USA.....	25
	Infiltrator Water Technologies, LLC.....	3
	Jet, Inc.....	15

	National Precast Concrete Association.....	9
	Norweco, Inc.....	13
	Orengo Systems, Inc.....	7
	Polylok, Inc.....	40
	Presby Environmental.....	5
	Rath North America.....	21
	Sim/Tech Filter Inc.....	38
	Simple Solutions Distributing LLC.....	38
	SJE Rhombus®.....	27

	T&T Tools, Inc.....	19
	The Dirty Bird.....	38
	TUF-TITE, Inc.....	2
	Wholesale Septic Supply.....	21
	Wieser Concrete.....	25
	WWETT Show.....	33
	Classifieds.....	37

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.



October 2022



Send your comments, questions or opinions to Jim Kneiszel at editor@onsiteinstaller.com

She Paid for Sewer Service For 14 Years – Then Found Her Septic Tank

Strange story of North Carolina renter shows you can't tell the difference between sewer and septic — until something goes wrong

If anyone tries to argue the big pipe municipal wastewater system is superior to an onsite system, tell them about Carla Shields of Graham, North Carolina.

Shields has rented her home for 14 years, diligently paying her city sewer bill and presumably pleased with the wastewater service. That is, until her toilet backed up and the plumber who responded to fix it informed her she had a septic tank.

Of course, now Shields is focused single-mindedly on getting her sewer payments back from the government, as reported recently in the *Queen City News*. It's a story we can all relate to as taxpayers, rooting on as the little guy — or gal, in this case — tries to claw back thousands in erroneous billings from the local authorities.

But are we missing the forest for the trees? Perhaps the big-picture story here is not an instance of someone paying for services not received over a long period of time. Maybe the happy news is that it makes no practical difference if you have an onsite system or are connected to the municipal sewer as long as you provide minimal care for the infrastructure involved.

And this drives home an important point you can be making to your customers: decentralized wastewater service is not only cost-effective over the long haul; but you also won't be able to tell you're not receiving high-priced municipal sewer service so long as you pay attention to routine maintenance.

Isn't this the message we've been sharing at *Onsite Installer* for many years? It is, indeed.

BLISSFULLY IGNORANT

Let's back up and learn a little more about Carla Shields of Graham, North Carolina. She told the local media outlet that when she began renting the house, she started paying the \$35 monthly bill for sewer services. Over time, that would add up to \$420 a year, and \$5,880 over the 14-year span, to treat her wastewater.

In actuality, she was using — and without knowing it — abusing a septic system. Think about it. If she didn't know she was on septic, she presumably never followed any of the recommended advice you share about spacing out household flows, for example.

While installers might tell homeowners to restrict clothes laundering to

Never assume your clients have a firm grasp on the details of their wastewater treatment. Whenever you encounter a customer — even if they've lived in their house for years — start your discussion with the Septic 101.

a load or two at time or watch the frequency of toilet flushing or duration of showers, Shields didn't know any better to do that. Or installers might tell customers to watch out how many relatives come over for Thanksgiving dinner or to refrain from loading the house with long-term guests. Shields would be clueless to control heavy-use events.

And what about maintenance? Typically an installer will talk to users about recommended periodic inspection and pumping, or to clean outlet filters and never drive over the drainfield. Shields blissfully lived her life without these concerns. So she may have driven on, planted a garden over or otherwise abused her drainfield. She never checked for a filter because she didn't think she had one.

And still, she went 14 years without experiencing symptoms of a failure. And without investing a single dollar into maintaining her septic system. If it weren't for her paying the city for a sewer service she didn't receive, I would say she was getting a wastewater service bargain all of these years.

CITY SHOULD HAVE KNOWN

This is not to say I don't feel empathy for Shields. I do.

The response from the city is disappointing and puts Shields in a bad spot. Officials told her she could only recover the last two years of payments, and that she had no recourse to seek the previous 12 years of payments.

"My problem is if I am not using the service ... it's fraudulent charges," she said in the story. "How are they coming up with these charges when there's no usage?"

She was told landlords are responsible for hooking up to the city sewer lines at any point in time, something that was going to be done shortly after Shields experienced the failure. However, it seems like the city should know when it's receiving payment for service from a property that isn't hooked up to the municipal pipe.

WHAT WE LEARNED

While this is one little story out of a small town in North Carolina, there are a few important take-aways for system installers:

Your onsite systems are as effective as Big Pipe. Some folks claim municipal sewer systems provide superior wastewater treatment. You typically hear this message when a city wants to expand its borders into new territory and serve large commercial water and wastewater customers. It's a marketing message that perhaps held a little bit of truth for past generations of homeowners. But not so much anymore as onsite technology has improved dramatically and decentralized systems often prove more cost-effective than bloated public treatment options. When promoting the private option, you never have to take a backseat to public sewer infrastructure or let anyone argue onsite is a stopgap measure on the way to something better.

The need for customer education never ends. Never assume your clients have a firm grasp on the details of their wastewater treatment. Whenever you encounter a customer — even if they've lived in their house for years — start your discussion with the Septic 101. As you learned from the situation in North Carolina, a person can go for years without knowing whether their home is served by an onsite system or municipal treatment. Take pains to explain how their onsite system works, the rules for how they should use it, and the importance of ongoing maintenance. Then reinforce that message with follow-up communications or anytime you are called out to their house.

It's important to help the less fortunate. The renter in our story explained she was on a fixed income and couldn't afford a mistake like paying for sewer service she wasn't receiving. Some of your customers may also be in a dire financial situation and you should help out when you can. Sometimes you don't know the financial burden people are under when they call on you for help. I commend the many installer contractors who try to give a break to senior citizens, military veterans or those faced with unexpected emergency repair or replacement orders. You are a credit to the industry and good stewards of the environment. □

Drop Us a Line

Have a comment about an article you've seen in *Onsite Installer*? An experience from a job that you'd like to share? *Onsite Installer* would love to hear from you. Email comments and photos to editor@onsiteinstaller.com

WIRING JUST GOT EASIER SIMPLE. INTUITIVE. SMART.

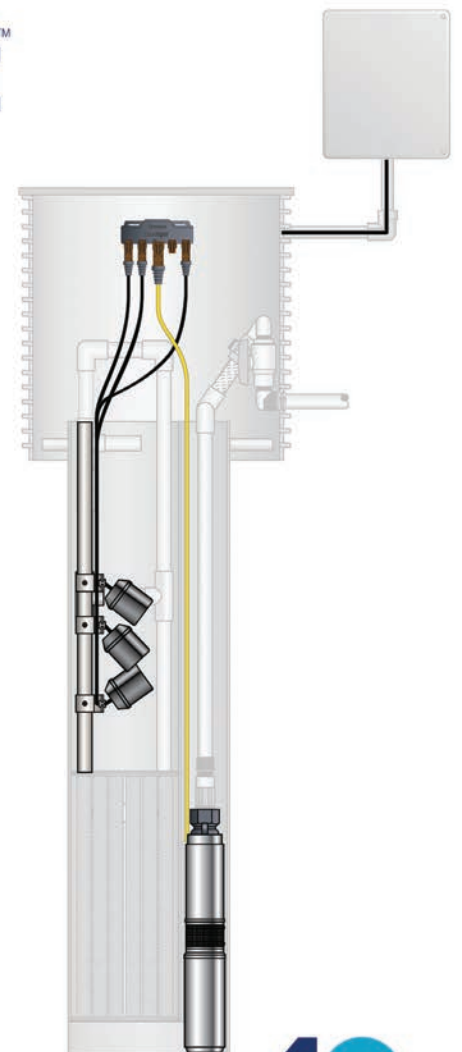
ClickTight™

Choose ClickTight™ from Orenco to connect a control panel, up to four floats, **and a pump.**

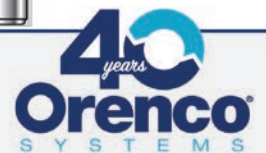
With ClickTight, you can ...

- Eliminate splice boxes
- Connect to a broad range of control panels with 60 feet of direct-bury wiring cable
- Attach a wide variety of pumps using a pump adapter
- Save time and money

Try ClickTight™ Today!



To learn more, contact Orenco at (800) 348-9843, +1 (541) 459-4449, or visit www.orenco.com.



Integrated

Cross-functional technology
can be combined to meet
nearly any treatment standard

BIOMICROBICS

BIO MICROBICS

BETTER WATER. BETTER WORLD.

1-800-753-3287

www.biomicrobics.com

sales@biomicrobics.com

©2022 BioMicrobics Inc. All Rights Reserved.

@onsiteinstaller.com

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



EQUIPMENT MAINTENANCE Choosing the Right Lubricant

From engine oil to hydraulic fluid to gear oil, a lot of lubricants — and maintenance — are required to keep your heavy equipment running as it should. Getting the right fluids and creating a maintenance schedule is important for your fleet. Here two industry experts talk about how to choose the correct lubricants for the equipment your business relies on. onsiteinstaller.com/featured



DO THE MATH

Media Volume Calculations

It's important to know how to properly estimate the amount of media needed on an onsite system installation job site. Excessive volumes of media result in unnecessary cost. Yet underestimating the amount of media can delay an installation. This online article outlines the easiest way to calculate the amount of media you need for a soil treatment area. onsiteinstaller.com/featured

Overheard Online

“Put yourself in the employee's shoes as you communicate and ground yourself in a real sense of empathy.”

— *6 Best Practices for Handling a Layoff Sensitively*
onsiteinstaller.com/featured



THE IMPORTANCE OF PICTURES

Quality Images Boost Your Business

Rare is the Google search that doesn't bring up photos. Google is getting better at recognizing images and tying them to your business and the services you provide. For your business, that means that increasing the quality and share of images in search helps with rank, visibility and conversions. This article will help you how to take advantage and use quality photos to boost your company's online presence. 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

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

PRECAST DAYS 2022

MAKE PLANS NOW FOR OCT. 17-22

Join the National Precast Concrete Association and manufacturers from across the United States as we showcase modern precasting and celebrate our industry. Precast Days provides an opportunity for you to visit a local facility and get a behind-the-scenes look at how precast concrete products are made.

Visit [Precast.org/PrecastDays](https://www.precast.org/PrecastDays)



Go on a plant tour



Create new business relationships



Meet others within the industry



Education sessions with PDHs



PREMIER SPONSOR



PROGRAM SPONSORS

- Concrete Sealants Inc.
- GCP Applied Technologies
- Ratec America Corporation
- Titan 3000 Precast Management System
- Topwerk America Inc.

BROUGHT TO YOU BY





THE TRIPLE THREAT

The owners of Connecticut's County Line Septic grew by catering to every aspect of septic service, from installs and repairs to real estate inspections to ongoing pumping

By Ken Wysocky

◀ Technicians Josh Gondek, left, and Paul Meikle assemble a TUF-TITE distribution box for an onsite system in Vernon, Connecticut. (Photos by Scott Eisen)

Just as a four-legged stool is much steadier than one with two legs, a business that offers multiple services typically offers more stability than a single-service company.

A good case in point is County Line Septic, a full-service company that installs and repairs septic systems, performs septic system inspections and pumps tanks. It's based in Willington, about 20 miles northeast of downtown Hartford, Connecticut.

When coupled with a strong emphasis on customer service, the combined-services approach has provided co-owners Chris Sutyla and Mike Norcross with a formula for success.

"When you can offer customers a complete package of services, they don't have to go elsewhere for this and that," Sutyla says. "We can take care of all aspects of septic service — we have all the bases covered.

"Also, if people go to another company for services you don't provide, they might use that company for all their service needs and you just get pushed down the road," he adds. "So it's just better if you can do it all."

Offering multiple services wasn't part of a formal business plan. Instead, it just made sense because Norcross and Sutyla worked at the same company for several years before striking out on their own. Sutyla handled system designs and installations and Norcross managed the tank pumping, septic system repairs and inspections, Sutyla explains.

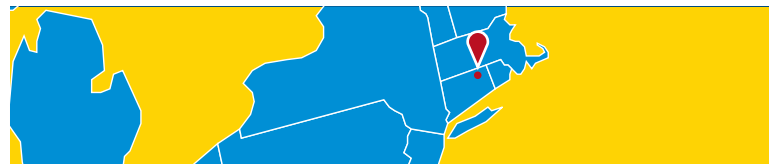
"When we came together to form a company, we decided to be a full-service company instead of picking out just one or two aspects," he says. "We each had our niche at the other company and we decided to keep it that way."

"If people go to another company for services you don't provide, they might use that company for all their service needs and you just get pushed down the road. So it's just better if you can do it all."

Chris Sutyla

CONSISTENT REVENUE STREAM

The multiservice approach pays dividends in other ways, too. For example, throughout a year, some services are more in demand than others. So providing multiple services helps even out the seasonal highs and lows and keeps cash flow more



County Line Septic Willington, Connecticut

Owners: Chris Sutyla and Mike Norcross
Founded: 2014
Employees: 9
Service area: Central and eastern Connecticut
Specialties: Septic system installation and repair, inspections and pumping
Website: www.countylineseptic.com

consistent, Sutyla notes. Furthermore, synergies between the various branches of the company allow it to cross-market services. For example, system inspections can give the company a foot in the door for tank pumping and system repairs — and vice versa, he says.

"One thing can easily lead to another," Sutyla says.

"Performing system inspections gets us a lot of work," Norcross adds. "It's much more important than pumping. Our inspections basically feed the installations and repair work."

About 60% of the company's revenue comes from system installations, with tank pumping and system inspections kicking in about 20% each.

Providing many services requires an array of equipment. To pump tanks, the company relies on a 2010 Peterbilt 384 equipped with a 4,000-gallon steel tank and a Jurop vacuum pump.

To install septic systems, the company owns a John Deere 135 excavator, a Kobelco SK60 excavator, a Bobcat 334 mini-excavator, a Takeuchi TL10 skid-steer and a Bobcat S160 skid-steer. The company also has invested in a 2011 Peterbilt 388 tri-axle dump truck with a Beau-Roc dumpbody, a 2019 Ford F-450 carrying a Reading Truck utility body, and a smaller dump truck that features a 2021 Ford F-450 chassis and a Mason dumpbody.

For system inspections, the company invested in a RIDGID SeeSnake pipeline inspection camera.

MAKING OUR OWN WAY

After working for about a year as a diesel mechanic following high school graduation, Sutyla realized he wasn't cut out to work indoors. So when a septic service company offered him a job, he jumped at the opportunity. "Like a lot of guys, I like digging in the dirt and working with equipment," he says.

INSPECTION PROTOCOLS ADD VALUE

To add value to the pumping process, Mike Norcross follows a tank inspection regimen that's standard operating procedure at County Line Septic — but may be overlooked by busy pumpers eager to move on to the next job.

"It's something I was taught in my 20s," says Norcross. He co-owns the company with Chris Sutyla. "It's helpful because it catches things before they can become major problems. And it doesn't take very long to do."

After the pumpout, Norcross checks a tank for signs of deterioration or cracks. He also examines the inlet and outlet baffles to ensure they're intact and functioning properly. If someone is home when the tank is pumped, he asks them to run a small amount of water in the house to make sure the inlet pipe is clear and working properly.

When he's finished, Norcross backfills the excavation and plants grass seed. Then he fills out a tank evaluation form that includes information such as the tank size, its condition, a hand-drawn map that shows the exact location of the lid and any service recommendations stemming from things he observed during his inspection.

"The most drastic thing we ever find is leaking tanks, cracks above or below the waterline and deteriorated or missing baffles," Norcross says. "Sometimes I also see high liquid levels, which could indicate a possible malfunction in the leachfield."

"Repairs may not be something they need to do tomorrow, but finding the problem early at least gives customers time to prepare for it," he adds.

Norcross only inspects tanks during pumpouts, not leachfields. But if he sees something problematic, he then recommends a complete inspection of the leachfields with a fiber optic inspection camera.

Septic system inspections related to home sales are more extensive. Norcross uses a push camera to examine pipes, the distribution box and the leachfield. He also measures and notes the location of key components.

Norcross then gives customers a presentation about the system, educating them about its functionality. A typical inspection takes one to two hours, depending on the tank location and depth of the components. Later, Norcross emails customers a copy of his final report.



▲ Josh Gondek is at the controls of a Deere excavator during a septic system installation for County Line Septic.

The job provided him with a good foundation in the septic industry. After obtaining a commercial driver's license, he pumped tanks and did small repairs and inspections.

Norcross started his career at a company that did utility line locating, then landed a job at a septic company that a friend owned — the same company where Sutyla worked. During a 7-year stint there, Norcross developed a range of skills, including pumping tanks, installing and repairing systems and real estate inspections.

"Then the company merged with another one, so we decided to start our own business," Norcross says.

They named the company County Line Septic because the business was located near the Tolland and Windham County border, Norcross says.

A SLOW START

Even though Norcross and Sutyla had a broad background in the industry, it was tough going at first.

"Initially, our goal was survival — just hoping to make a living and see where the road takes us," Sutyla says. "We found customers mostly through word of mouth because we didn't have a lot of money for advertising. ... We touched base with a lot of people."

"We put every penny we had into the business and hit the streets," he continues. "It's always tough when you start a business compared to buying one. We literally had nothing at the start."

"We definitely took a risk," Norcross notes. "We left regular paychecks behind and put everything we had into the business. All we really had was the belief in ourselves and our abilities."

Fortunately, Norcross had already developed a network of business contacts that helped the company grow from just two employees to nine in eight years. To accommodate the growth, they bought a 2,400-square-foot auto body shop in 2016 that now serves as the company's home base.

"Even with the business contacts, getting our name out there was tough," Norcross recalls. "We didn't have any money for marketing — we couldn't even get a business loan. So we rented equipment at first, then slowly bought equipment as we saved money."

With little money available for marketing, Norcross also joined the local Chamber of Commerce as well as an organization called Business Network International.

continued >>



norweco

GREEN SERIES



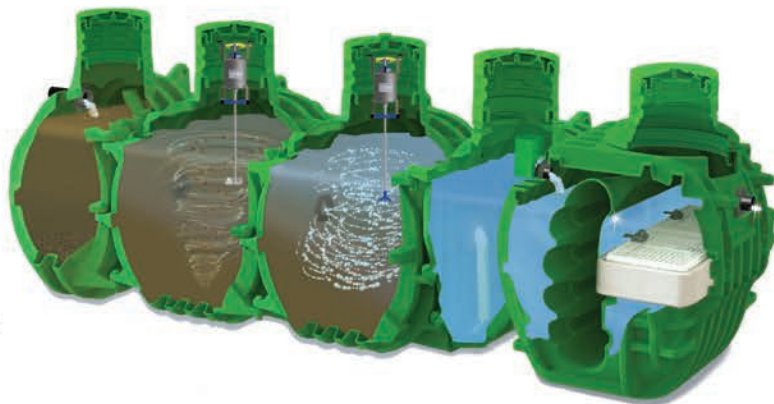
SINGULAIR HK[®] GREEN

UNMATCHED NITROGEN REMOVAL

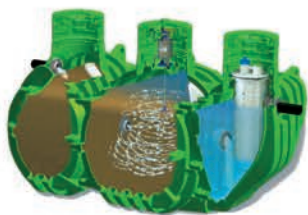


No Service For 18 Months!

- ◆ 84% Reduction of Total Nitrogen
- ◆ Exceptional Certified Effluent Results
- ◆ Simple to Install, Operate and Maintain
- ◆ No Complicated Recirculation Equipment
- ◆ Service Intervals Only Once Every 18 Months
- ◆ Rugged, Heavy Duty, UV Protected HDPE Tank



GO GREEN! EXPAND YOUR BUSINESS



SINGULAIR GREEN



SINGULAIR R3 GREEN



HYDRO-KINETIC GREEN

PROGRESS THROUGH SERVICE SINCE 1906

1-800-NORWECO www.norweco.com email@norweco.com



◀ Paul Meikle installs the cover on a concrete pump chamber while building a septic system.

“Performing system inspections gets us a lot of work. It’s much more important than pumping. Our inspections basically feed the installations and repair work.”

Mike Norcross

“Those were important sources of referrals early on,” he says.

Strategic pricing for services was important to growth. Sutyla says he doesn’t want to be the highest- or lowest-priced company.

“Sometimes the low bids are so low you don’t know how they’re doing it,” he notes. “We always encourage our customers to get more than one bid. But at same time, we tell people they shouldn’t always go with the lowest bidder.”

BUILDING A NETWORK

A key strategy centered on building a network of contacts with real estate agents to obtain referrals for systems inspections, which in turn led to pumping, installation and repair work, Sutyla says.

“Mike did a lot of that networking,” he says. “He’s the face of our company.

“Developing relationships with real estate agents was our main

stepping stone,” Sutyla continues. “We reached out to everyone we could to let them know we were out there and hungry for work.”

The company currently averages about 400 inspections annually.

County Line Septic installs about 60 septic systems a year, plus 20 to 30 tank replacements to replace leaking units. Most of the systems are traditional gravity-fed designs that typically rely on leachfield chambers made by Infiltrator Water Technologies, including Quick4 chambers, and Mantis leaching systems from Eljen Corp. for properties with limited space for septic systems.

Roughly 80% of the tanks the company installs are 1,000- to 1,500-gallon concrete tanks made by Jolly Precast or plastic tanks made by Infiltrator, Sutyla says.

The company also occasionally installs smaller, custom systems to specifically treat water-softener discharge water. Connecticut regulations bar water-softener discharge from entering septic tanks because it can create sludge buildup in leachfield components as well as plug up the surrounding soil, which can diminish the life of systems, Norcross says.

“We don’t do a lot of them,” he says. “There’s no tank involved, just miniature leachfields.” The company uses chamber components from Infiltrator to build the systems.

SERVICE SELLS

Providing top-notch customer service with a personal touch also has been critical to the company’s success. Little things can have a big impact, whether it’s carrying 200 feet of hose on the vacuum truck to avoid driving

➤ Josh Gondek places a Mantis unit from Eljen into a drainfield for a new septic system.



on customers' lawns to reach a tank or making sure someone always answers the phone — no voicemail or answering services used, Sutyla says.

"Our big thing is customer service," he says. "When customers call, they're going to talk to Mike or me. When people call and the owners answer the phone, I think it makes a good impression.

"I always stop by at jobs or work with my guys, too," he adds. "It's better when customers deal with the same person all the time. We've had people tell us they're very happy and feel comfortable talking to someone who's knowledgeable about their issues."

The duo's customer service philosophy has been informed by their experiences working at other companies. The bottom line: Treat customers the way Sutyla and Norcross would want to be treated.

"We treat all customers respectfully and hope we get the same back from them," he says.

Of course, treating employees well also influences the kind of customer service they provide. To that end, the company pays a percentage of employees' health insurance premiums, offers a 401(k) retirement program with a company match and pays Christmas bonuses, he says.

"We do our best to treat our employees well," Sutyla says.

ILLUMI-JET UV DISINFECTION UNIT®

MODEL 952

- UL listed as a NEMA 6p enclosure (watertight submergence test)
- Install directly in ground or in pump tank on the effluent line
- Complete disinfection without the use of chemicals
- Hermetically sealed electrical components
- High capacity disinfection reservoir
- Kapton® seals improve serviceability
- Rated treatment of 10 gallons/min

Easy to service

Rugged construction

Dependable electrical design

Innovative disinfection design

**Replacement parts to fit most UV disinfection units*



www.jetincorp.com





▲ Mike Norcross, left, and Chris Sutyla of County Line Septic in Willington, Connecticut.

INSPECTION PROTOCOLS

To add value to the tank-pumping process, Norcross follows a regimen aimed at detecting potential problems, as opposed to just pumping a tank and moving on to the next customer.

After the tank is empty, he checks for signs of deterioration or cracks and examines the inlet and outlet baffles to confirm they're intact and functioning properly. If homeowners are present, he asks them to run water in the house so he can tell if the inlet pipe is clear and working properly.

When he's finished, Norcross backfills the excavation made to find the tank lid and plants grass seed. Then he fills out a tank evaluation form that includes information such as the tank size, its condition, a map that shows the exact location of the lid and service recommendations stemming from things he detected during his inspection.

Septic inspections related to home sales are more extensive. Norcross uses a push camera to examine pipes, the distribution box and the leachfield. This allows him to see both the current liquid levels as well as previous high-level marks. He also measures and notes the location of key components.

Norcross then gives customers a presentation about the system, educating them about its functionality. A typical inspection takes one to two hours, depending on the tank location and the depth of the components. Later, customers receive a copy of Norcross' final report via email.

"It's better when customers deal with the same person all the time. We've had people tell us they're very happy and feel comfortable talking to someone who's knowledgeable about their issues."

Chris Sutyla

SLOW AND STEADY

Looking ahead, Sutyla says he and Norcross want to keep streamlining the service end of the business by eliminating some of the paper processes. They'd also like to add another vacuum truck for pumping tanks and delegate more responsibility to field staff.

"You can't take your hands totally off the wheel, though, because you have to ensure things are done that certain way you want them done," Sutyla says.

The partners also want to foster slow but sustainable growth as opposed to exponential growth that could hamper their ability to do quality work and provide great customer service.

"Major headaches can come with growth," he explains. "You might raise sales super high, but your overhead goes through the roof. It can reach a point where you're a huge company but you're still not making much more money than if you were a smaller company."

"Mike and I want to keep our hands in everything," he continues. "We know the kind of customer service we want to provide. So while we want to grow a little bit bigger, we also want to tighten things down and keep providing great customer service." □

featured products

Eljen Corporation
800-444-1359
www.eljen.com
(See ad on page 39)

John Deere
800-503-3373
www.johndeere.com

Infiltrator Water Technologies
800-221-4436
www.infiltratorwater.com
(See ad on page 3)

Jurop/Chandler
800-342-0887
www.chandlerequipment.com

RIDGID
800-474-3443
www.RIDGID.com

TUF-TITE, Inc.
800-382-7009
www.tuf-tite.com
(See ad on page 2)

Biorock

engineered for tomorrow



BENEFITS FOR YOUR CUSTOMER

- ✓ Long Septic Tank Pump-Out Intervals
- ✓ Media Lifespan Is Up To 10 Years
- ✓ Minimal Annual Maintenance
- ✓ Ultra-Compact & Discreet
- ✓ Low Operational Costs
- ✓ Long Absence Periods
- ✓ Odorless
- ✓ Non Electric
- ✓ Silent

Biorock is a direct solution for pros who seek **faster** and **easier installations** and maintenance, saving time and labor without sacrificing product or output quality.

✓	NSF/ANSI 40- Class 1	🔧	Less work for install
🔄	Direct replacement for repairs	🏠	Smaller drain field required
💰	Below average product cost	👥	4 to 15 person capacities

Now accepting preorders for Ecorock 600

Contact us today
for more info!

Weston Williams
New Product Sales Leader
wwilliams@acuantia.com
(817) 727-8227
www.biorock.com

Acuantia.

shop our brands



Massachusetts may require nitrogen technology for all of Cape Cod

By David Steinkraus

Indications are Massachusetts will change its Title 5 onsite rules to require nitrogen-reducing technology on all of Cape Cod. The Massachusetts Department of Environmental Protection has contacted town managers in advance of a general notice about the change, reported Cape Cod news organizations.

Changes may require upgrades of all existing systems within five years after the regulation takes effect, which may give towns the option of applying for a watershed permit, allowing them to tailor solutions to their particular circumstances.

Four communities already hold a single watershed permit for Pleasant Bay on the eastern end of Cape Cod. The permit was issued in 2018 and was the first in the state. It requires the communities to cut nitrogen flow into the bay by 39,022 pounds (17,700 kg.) in 20 years. Three communities are building sewer systems. The fourth is reducing fertilizer use on its municipal golf course, improving drainage, considering alternative technologies and planning a small treatment system.

Stanley Andrews, who chairs the board of health in Bourne, told the *Cape Cod Times* that some Title 5 change by year's end is a good possibility if for no other reason than the lawsuit filed last summer against the state and the towns of Barnstable and Mashpee.

In the lawsuit, the Conservation Law Foundation asked a court to suspend permits for conventional septic systems in the two towns until they develop a plan to stop nitrogen pollution. For years the towns and state have known that nitrogen pollution from septic systems is fouling waterways, the foundation argues in its suit. By continuing to approve permits, the towns and state have allowed pollution to continue and thus have violated state law, the suit asserts. Instead of conventional septic systems, the foundation wants advanced treatment units to be required when onsite systems are installed or when properties are transferred.

Thirty watersheds on Cape Cod have nitrogen total maximum daily loads approved by the U.S. Environmental Protection Agency.

Brewster Town Administrator Peter Lombardi told www.wickedlocal.com that the process of changing Title 5 is only beginning. A meeting with town officials would be followed by a public comment period, he said.

Maryland

Anne Arundel County notified installers that the state has ordered changes for onsite permits and applications in the county.

Site plans will now be required for all repair applications. The county Health Department will conduct a perc test as it has done, and will then send a letter to the property owner, applicant and contractor recommending minimum onsite requirements. It will be up to the property owner to decide who will create and submit the site plan.

Site plans must be signed and dated and should include information such as locations of nearby structures, locations of wells within 100 feet of the property, swimming pools, layout and design of the proposed system, rights of way and easements, and anything that could impede installation of a system.

Permits for conventional tanks will no longer be automatically issued, and the process for perc and dry wells will also change.

California

Directors of the Sonoma County Water Agency voted in June to conduct a study of wastewater treatment options for properties along the lower Russian River. Homes and businesses in Monte Rio and Villa Grande rely on onsite systems that don't meet current standards and could discharge untreated effluent into the river and its tributaries, according to a press release from the county.

Brelje & Race Consulting Engineers of Santa Rosa will conduct the \$425,000 study of options including one or more alternatives recommended by a citizens advisory panel and representatives of local governments. The next step would be a pilot project to begin upgrading onsite treatment.

Sonoma County supervisors will consider revisions to the county's onsite treatment manual in early 2023. Information about the proposed changes is available at www.permitsonoma.org/divisions/engineeringandconstruction/wellandsepticystems/septicystems/owtsmanual

Texas

The chair of the Hood County Republican Party lost a court fight over maintenance of his onsite system. A judge found Steve Biggers has not been maintaining his system in accordance with county regulations.

Biggers has said publicly that he believes trained homeowners should be able to maintain aerobic systems instead of being forced to contract for the service, reported the *Hood County News* in Granbury, Texas. Court testimony showed Biggers had taken training from the Texas A&M AgriLife Extension Service.

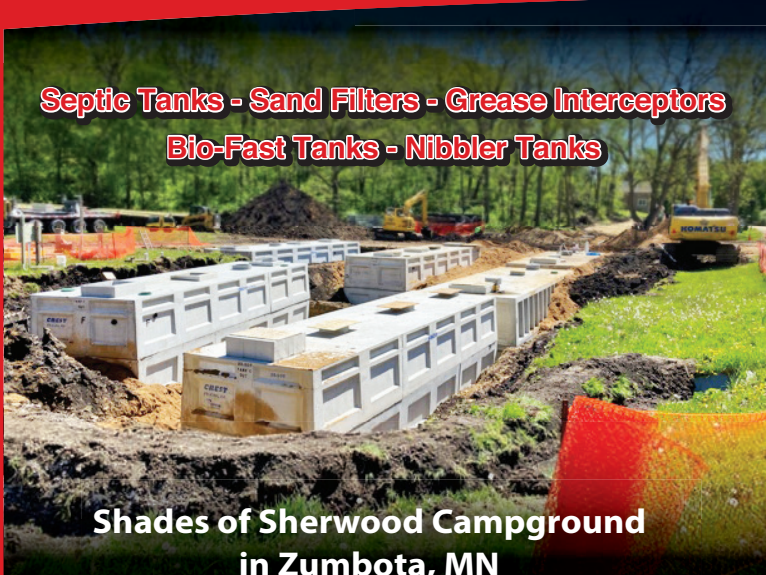
Some counties accept that training as sufficient, but Hood County requires homeowners to complete a more intensive two-day training through the Texas Onsite Wastewater Association if they want to maintain their own systems.

County Attorney Matt Mills said the court decision means that if Biggers doesn't comply, the county could consider asking a judge to hold him in contempt of court. □

"Rules and Regs" is a monthly feature in *Onsite Installer*™. We welcome information about state or local regulations of potential broad interest to onsite contractors. Send ideas to editor@onsiteinstaller.com.

Water Tight Structures

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



Shades of Sherwood Campground in Zumbota, MN

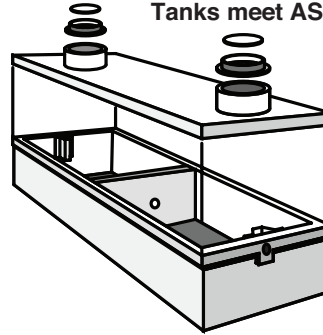
2- 38,000 gallon septic tanks, 20,000 gallon pump tank,
5 each 20,000 gallon recirculation tanks
and 3 each 7,700 gallon pump tanks were installed

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



Nationwide Service

CREST Precast, Inc.

PCI & NPCA Certified Plant

www.crestprecastconcrete.com

info@crestprecastconcrete.com

1-800-658-9045



THIS IS WHAT IT WOULD LOOK LIKE IF WE PRINTED ONSITEINSTALLER.COM
— THOUSANDS OF STORIES, PRODUCTS AND IDEAS

**ONSITE
installer**

GET ACCESS TO EVERYTHING WE CAN'T FIT IN THE MAGAZINE.
ADDITIONAL STORIES, VIDEOS, NEWS BRIEFS AND OTHER GREAT
INFORMATION THAT LETS YOU GET THE MOST OUT OF *ONSITE INSTALLER*.

WWW.ONSITEINSTALLER.COM



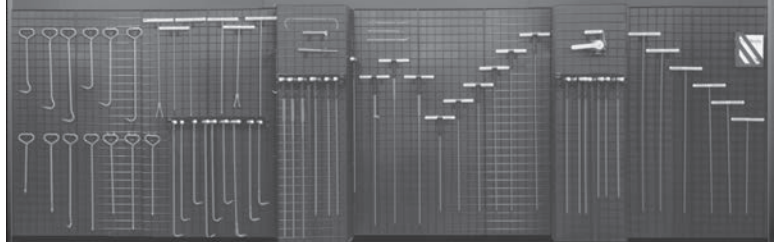
T&T Tools, Inc.

800.521.6893

Probes ▼ Hooks

T&T Tools, Inc.

Probes ▼ Hooks



Hooks...

- * Heat treated 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@mightyprobe.com

Fax: 800.521.3260

How Should You Use Soil Survey Data In the Field?

You've gone online and checked the soil characteristics of your site. Now walk the land and create the appropriate treatment system.

By Jim Anderson and Dave Gustafson

In a recent column we discussed the use of the web soil survey as an integral part of the preliminary site evaluation. Again, the web soil survey address is as follows: websoilsurvey.sc.egov.usda.gov/app/homepage.htm.

We encourage you to explore this site and become familiar with the available information on soils in your area. The site is useful whether you are dealing with problem soils such as those high in sodium content, or more suitable soils for installation of systems. Looking at the map unit descriptions gives insights into how soils may change across your site based on landscape characteristics. The series descriptions and soil profile descriptions shed light on soil morphology features to look for when soil pits are opened during the field phase of a site evaluation.

At this point it's important to point out information contained in the web soil survey was gathered at large scale; roughly a boring or two every 3-5 acres, with assumptions made about continuity based on landscape position, vegetative growth and appearance at the surface. It was not intended to be used in place of an actual onsite soil evaluation. Rather, it is a guide for what to look for when you are on the site.

HIGH SODIUM SOILS

Determining the use of soils in high sodium content is an example. From the web soil survey, you learn pH can be an indicator of sodium-caused problems. If the pH is above 8.0, you will likely see problems with permeability. A handheld pH meter or pH color strips can be used in the field to test the condition in your soil pit.

From the series descriptions it can be learned that soils high in sodium have prismatic, or columnar structure, in the subsoils on these sites. If you see this structure in the pit you are evaluating, it should immediately suggest a problem. Other soil characteristics to look for are dark black soil peds that are shiny on the surface. Some may have visible, small white crystals; these can be an indication of sodic soil. In addition, sodic soils may have a soapy feel when moistened and textured.

Once the problem is identified during the field evaluation, the focus turns to using this information to provide some design guidance or — if you are the site evaluator and designer — to determine what you are going to do relative to this specific site. This is true for any soil condition, not just problem soils.

The first recommendation is to avoid that site if possible. In other words, look for a more suitable site on the lot. This is where map unit descriptions can help by indicating the kinds of inclusions or other soils that may be present in the area. If that is not feasible, try to locate the system in an area with the best surface drainage available. Sodic soils are subject to becoming waterlogged, so it is important water can move away from the system.

Another note here: It becomes even more important in this situation that surface water be diverted from the system. It may also be helpful to install a combination berm and curtain drain around the system.

SPREAD THE FLOW

Due to the very slow permeability, the goal in terms of the soil treatment and dispersal unit should be to spread the flow out as evenly as possible over the infiltration area. The two best kinds of soil treatment units to do this are sewage treatment mounds or drip irrigation. There should be no excavation of the soil. The soil surface should be used as the infiltrative surface. The surface should be prepared as for any mound installation with the surface scarified and vegetation removed.

For a mound system, the design should start with a minimum elevation in the clean sand 2 feet above the soil surface. This means the mound will be 4.5 feet tall where crowned at the top and 4 feet at the upper side-wall of the infiltration bed. Application of effluent in the infiltration bed should be through a pressure distribution network. Similarly, drip irrigation can be installed in an elevated sand bed a minimum of 2 feet above the soil surface. Both meet the goal of applying effluent over the entire soil treatment area during the day. Salt tolerant grasses or vegetation should be established over the site upon completion.

One additional important piece of information is needed. For sodium affected soils or soils with high shrink-swell characteristics, the soil sizing factor to determine the infiltrative area needed to accept the effluent should be in the range of 0.12 gpd per square foot to 0.2 gpd per square foot. This means the

(The web soil survey) was not intended to be used in place of an actual onsite soil evaluation. Rather it is a guide for what to look for when you are on the site.

PREMIUM PRODUCTS

at wholesale prices

Wholesale
SepticSupply

EFFLUENT PUMPS



**STA-RITE DOMINATOR
STA-RITE STEP20
FRANKLIN E SERIES**



HIBLOW 60/80 REBUILD KITS

QUANTITY DISCOUNTS
AVAILABLE

AIR PUMP DIFFUSERS

CLEARSTREAM CS113
HIBLOW



FUJI MAC 80



QUANTITY
DISCOUNTS
AVAILABLE

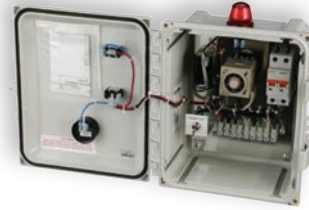
3-YEAR WARRANTY



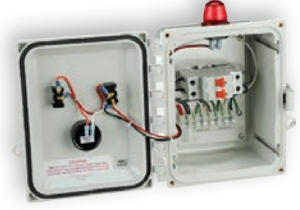
WATER TANK FLOAT SWITCHES



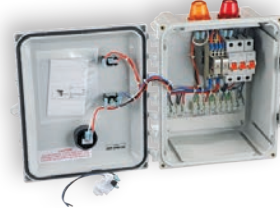
SJE-RHOMBUS
FLOAT
SWITCH



DOSING PANELS



SIMPLEX PANELS



AEROBIC PANELS



DUPLEX PANELS

FREE SHIPPING ON ALL PRODUCTS

www.wholesalesepticssupply.com • (936) 681-8198



SOCIALLY ACCEPTED



facebook.com/OnsiteInstaller
twitter.com/OnsiteInstaller
youtube.com/OnsiteInstaller
[linkedin.com/company/
onsite-installer-magazine](https://linkedin.com/company/onsite-installer-magazine)

absorption area needed beneath the mound or elevated sand will be between 3,000 and 5,000 square feet for a four-bedroom house and an estimated daily sewage flow of 600 gpd. How the system area is configured will depend on other site characteristics such as slope.

From this example, we hope you can see soil survey information can be used to inform and direct the in-field part of a site evaluation and can be used to establish design parameters when the knowledge is applied in the field. □

**Roth
MULTITANK**

Septic Tanks • Water Cisterns
Pump Tanks • Holding Tanks
Rain Water Harvesting

Multi Usage Multi Layer Multi Coverage

- Inner layer of FDA approved virgin HDPE, two inside layers of PE for improved stability, plus one outer layer of black and UV-stabilized PE
- Lifetime* corrosion protection and 5 years of labor insurance
- Strongest & heaviest poly tank on the market
- No water for backfilling required
- Low profile
- 100% watertight

Our multi-layered tank construction, consisting of virgin material surrounded by 3 layers of protection.



BEST TANK. BEST WARRANTY. BEST SYSTEM.

Roth Global Plastics

www.roth-america.com 866-943-7256

*see warranty for details

HAVE A STORY IDEA?

Email us at editor@onsiteinstaller.com

SYSTEM PROFILE



◀◀ Mark Yohnk with Stolt Excavating uses a John Deere 35C ZTS mini excavator to move septic sand inside Eljen's Mound in a Box. (Photos courtesy of Mark Prevost)

Owners of a three-bedroom seasonal lakefront cottage in Ladysmith, Wisconsin, wanted to make it their permanent residence and build an addition. A 2,000- to 3,000-gallon concrete holding tank was the typical septic upgrade for Lake Flambeau residents, but the homeowner didn't want to deal with routine pumping.

An onsite consultant recommended designer/installer Joe Rubenzer, proprietor of Stolt Excavating in Bloomer, Wisconsin. "Due to setbacks, a 3% grade, and lack of space, no typical system would fit on the lot," he says.

Rubenzer asked Mark Prevost, from First Supply and an Eljen distributor, and CeCe Rudnicki, wastewater specialist and plan reviewer with the state Division of Industry Services, to meet him at the site. After a soil test confirmed they could install a mound, they discussed how to do it.

The team worked weeks measuring and laying out designs onsite. "We even brought in Jim King, president of Eljen, before finding the solution — an Eljen GSF Mound in a Box," says Rubenzer. "However, it still wouldn't fit on the lot without county and state variances for setbacks."

The mound also had three sides instead of four, with the toe extended to provide sufficient basal area for effluent to assimilate into native soil. The alteration made this an individual site design that required Rudnicki's in-depth review.

Site conditions

The 0.35-acre lot has silty loam soil with an application rate of .4 gpd per square foot. Depth to limiting factor is 14 to 20 inches.

Boxed In

A system using pretreatment in an elevated mound provides a solution for a home on a small lakeside lot

By Scottie Dayton

➤ Joe Rubenzer (left), owner of Stolt Excavating, and employee Forest Clements install a roll of Harvey 40-mil PVC shower pan liner from Oatey.

✚ Using a John Deere 130G excavator, Forest Clements with Stolt Excavating backfills and grades the 5-foot-wide expanse between the house and a wall of the Eljen Mound in a Box.



System Profile

Location:	Ladysmith, Wisconsin
Facility served:	Three-bedroom lakefront home
Designer/Installer:	Joe Rubenzer, Stolt Excavating, Bloomer, Wisconsin
Type of system:	Mound in a Box
Site conditions:	Silty loam, application rate .4 gpd per square foot
Hydraulic capacity:	2,450 gpd

System components

- Rubenzer designed the system to handle 450 gpd. Major components:
- 1,000-/600-gallon combination precast septic/pump tank and risers (Huffcutt Concrete)
 - 4-inch PL-525 effluent filter (Polylok)
 - STF-100A2 pressure filter (Sim/Tech Filters)
 - 0.4 hp Model PE41M effluent pump (Goulds Water Technology, a Xylem Brand)
 - 24 A42 sand filter modules (Eljen)
 - Installer Friendly Series Single Phase Simplex control panel (SJE Rhombus)

System operation

All piping is PVC Schedule 40.

Wastewater gravity flows 48 feet through the 4-inch house lateral with two 45-degree elbows to the septic chamber, then effluent drains to the pump chamber. Every 286 minutes, the pump runs 1.56 minutes, sending 39.6 gallons through the 2-inch force main 60 feet to the manifold dosing the 55-by-28-foot-wide drainfield.

Effluent disperses through four 25-foot-long rows of six modules separated by 8.25 feet. Above the modules, the 1.50-inch distribution laterals are sleeved in 4-inch perforated pipe. Each lateral has 10 (3/16-inch) orifices 30 inches apart, with four facing up and the fifth pointing down for drainage. After the liquid passes through the interwoven plastic corrugated core and black geofabric, it discharges to 22 to 36 inches of C-33 washed sand over native soil.

Installation

A forester cut three marked pine trees, leaving the stumps flush with the ground per code. Consequently, Rubenzer upsized the mound based on the stump area's square footage, then workers scarified the soil and covered it with C33 sand brought in with a Bobcat T595 tracked skid-steer. They also stockpiled sand at the toe of the mound.

To protect the sand from freezing inside the 55-by-30-foot-wide box, Rubenzer's crew dug 4-foot-deep load-bearing frost walls. (The frost line is 3 feet below grade.) Once Tri-City Concrete poured the 10-inch-thick walls, the cement took two weeks to cure in the August heat.

The box was 5 feet from the house and 3 feet from the wooded property line. When the crew returned, they insulated the inside walls with 2-inch-thick R10 foam board, then covered it with 6-by-100-foot rolls of Harvey 40-mil PVC shower pan liners (Oatey). After attaching the top of the liner to the top of the walls with duct tape, they joined the overlapping seams with Oatey's X-15 Bonding Adhesive. Careful installation of sand held the liner tightly against the insulation as the crew built the mound.

Driving the skid-steer, Dan Stolt transported the stockpiled sand on the road to the box, as Forest Clements backfilled using the John Deere 135G excavator. Mark Yohnk worked his John Deere 35C ZTS mini-excavator

SYSTEM PROFILE

“This project’s biggest challenge was the amount of thinking and planning that went into it. ... We completed the straightforward installation in three days.”

Joe Rubenzer

between the house and box, then maneuvered inside it to level and compact 3 feet of sand. Together, Rubenzer’s two Kenworth T800 dump trucks hauled more than 400 tons of sand and 100 cubic yards of topsoil in 30 loads from the quarry a half hour away.

The 24 modules installed smoothly. As the crew trimmed the excess liner flush with the surface of the mound, Clements reversed the excavator and dug the hole for the 12-by-6.5-foot-wide septic tank. It was bedded on 6 inches of sand and the lid covered with 2-inch foam board insulation before backfilling.

“This project’s biggest challenge was the amount of thinking and planning that went into it,” says Rubenzer. “We completed the straightforward installation in three days.”

Because the Mound in a Box was a first in the area, Prevest invited members of the Turtle Flambeau Flowage & Trude Lake Property Owners Association to observe the installation. Prevest, King and Scott Moore, also from Eljen, were available to answer questions.

“Eleven people responded and, as noon approached, our client grilled hamburgers and hotdogs for everyone,” says Rubenzer. “We did visit some



▲ Forest Clement (standing) and Mark Yohnk from Stolt Excavating install the Polylok 525 effluent filter in the Huffcutt Concrete 1,000-/600-gallon combination tank.

properties in the following weeks, but those homeowners found pumping a holding tank more affordable.”

Maintenance

Stolt Excavating maintains the system and Northwest Sanitary pumps the tank. □



▲ Joe Rubenzer, owner of Stolt Excavating, installs one of four 25-foot-long rows of Eljen GSF A42 modules.

featured products

Bobcat Corporate
800-743-4340
www.bobcat.com

Eljen Corporation
800-444-1359
www.eljen.com
(See ad on page 39)

**Goulds Water Technology,
a Xylem Brand**
866-325-4210
www.goulds.com

First Supply
608-222-7799
www.firstsupply.com

John Deere
800-503-3373
www.johndeere.com

Oatey Co
800-321-9532
www.oatey.com

Polylok, Inc.
877-765-9565
www.polylok.com
(See ad on page 40)

Sim/Tech Filter, Inc.
888-999-3290
www.simtechfilter.com
(See ad on page 38)

SJE Rhombus
888-342-5753
www.sjrhombus.com
(See ad on page 27)

Smart & Reliable

World leader in onsite ATU technology with over **1 billion** gallons of wastewater treated daily

Real life. Real treatment.

FujiClean USA™

📞 | 207-406-2927 🌐 | fujicleanusa.com ✉ | info@fujicleanusa.com

Can't get enough *Installer?*

Since 2004 *Onsite Installer* has been telling your story. Read past issues to relive the articles, news and events of the wastewater treatment industry.

Visit onsiteinstaller.com to read past issues

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

nPCA CERTIFIED PLANT

1-800-325-8456

Let's Teach How to Extend the Life of Onsite Systems

Tell homeowners about proper maintenance — and preach getting rid of garbage disposals.

Compiled by Betty Dageforde

In Snapshot, we talk to a member of a state, provincial or national trade association in the decentralized wastewater industry. This time we visit a member of the Maryland Onsite Wastewater Association.

Association involvement:

I joined the Maryland Onsite Wastewater Professionals Association about 15 years ago, not long after it started. I've done some volunteering and been involved in panel discussions, and I usually have a vendor booth at the conferences.

Benefits of belonging to the association:

Training and education are key benefits. It also brings together all the different branches of the wastewater industry — pumpers, installers, regulators — to share ideas and have a voice in the formation of policies and regulations. And what really sparks my interest is they're getting ready to build a training facility where they're going to have all the different treatment technologies and disposal systems (drips, mounds, pressure dose systems) on site and working. I'd like to see it opened up to the general public as well, to educate them because people don't want to get away from the old-time technology.

Biggest issue facing your association right now:

Keeping the membership and getting more people interested and involved. I wish company owners would get their employees involved. I'd also like to see the association put out public messages on how to take care of a system — simple things that can make it work properly and prolong its life, and alternatives to things that cause problems like quilted toilet tissue, wipes and detergent pods.

Our crew includes:

At Sample Excavating, I'm basically a one-man operation. I still do some of the physical work but I sub out a lot of the excavating to other installers and mostly concentrate on designing. At OSIS I am part of a really good team — three other service technicians, a great office staff, and the owner, Nancy Minahan — one of hardest-working people I've ever worked with, but always fair and supportive. I've worked for them for about eight-and-a-half years. Going from being a one-man show to being part of a group is very rewarding. You've always got somebody watching your back. We help one another and take turns being on call.

Typical day on the job:

Every day is different. I might be doing a layout on an innovative system, delivering a pretreatment system, working with an installer, operating equipment. A typical day with OSIS is doing service visits (checking the sludge levels, changing filters, making sure systems are working properly, fixing what needs to be fixed) and reviewing everything with the homeowners.



Mike Sample

I'm the owner and president of Sample Excavating. I'm also a service technician for Onsite Septic Inspection & Services.

Location: Glen Arm, Maryland

Age: 64

Services we offer: At Sample Excavating, I install systems and do design work for innovative and alternative systems, and I'm a stocking dealer for Hydro-Action. At OSIS we service, inspect and maintain best available technology systems and answer alarm calls. That also gives us a chance to educate homeowners, which I think is one of the most important things we do. I talk to people for as long as they want to listen about simple care and maintenance.

Years in the industry: I've been a licensed disposal contractor for 44 years, but I think I probably put my first septic system in when I was 16. My father was in the excavating business and I was the backhoe operator. I would get subbed out to do digging for plumbers and get left on jobs by myself, doing the whole project. One day the light bulb went on and I thought maybe I should go into business for myself.

» Mike Sample using a CASE 580 backhoe on a tank installation



The job I'll never forget:

I design a lot of drip disposal systems. A couple years ago, I put one in, it was working and everything seemed fine, but the filter would get clogged every week. It was driving me crazy. The woman and her adult son were very cooperative. They didn't have a garbage disposal, weren't flushing whatever. I scraped some of the crud off the disc filter and laid it on top of the manhole to take a picture of it, just to see if somebody else had an idea. When I blew it up it looked like grass seed. Then I saw it moving. The system had old terra cotta pipe and it was overwhelmed with drain flies. It was their larvae that were clogging the filter. The owner flushed all her drains with vinegar and baking soda to kill them off and then I strapped a couple bags of moth balls around the recirculation pipes and they haven't had a problem since.

My favorite piece of equipment:

I love my mini-excavator, a Yanmar ViO35. I wish I'd had that 30 years ago. We'd get on tight sites and I'd end up digging pipe repairs with a shovel rather than listen to a homeowner gripe about lawn damage from a big backhoe. There are a lot of jobs we used to do with a big rubber-tired backhoe that can now be done with a mini-excavator. They can be used to set pre-treatment systems, which are fiberglass, not concrete. Tracked skid-steers are another thing that really made the world better.

Most challenging site I've worked on:

A few years back, I designed a low-pressure dosing system on a lot where

the septic reserve area was in a triangle shape. Pressure-dosed systems have to be balanced so there's even distribution over all the trenches — which was difficult because I had one trench 40 feet long, one 80 feet, and one 60 feet. It was one of the hardest challenges I've had, to work out all the calculations to get that water to dose the whole system evenly. But it was rewarding to turn the pump on and see that each trench had the same pressure.

Oops, I wish I could take this one back:

Any time I broke away from the onsite septic trade — doing construction management, using my equipment for something else — I ended up thinking, "What am I doing here? Why am I doing this?" The worst thing I've gotten

OUR WIFI ALARM PROVIDES PEACE OF MIND!

The Xpert Alert® WiFi indoor alarm system helps protect your home 24/7 from potentially costly damage due to flooding, pump failure or freezing pipes. The system monitors and reports any residential alarm condition by notifying you locally (audible and visual alarms) and remotely via SMS text messages and/or emails over a WiFi or Ethernet network to your smartphone, tablet or computer. The sleek design of the enclosure, with its unique shape, smooth rounded edges, and large push button with LED light ring, makes this attractive alarm ideal for residential applications.

- Low temperature alert to help protect against freezing pipes
- Works with existing WiFi or ethernet network
- Notifies up to 4 contacts (2 email contacts and 2 text)
- 2 sensor inputs to monitor 2 separate alarm conditions
- No monthly fees/contracts or cellular connection needed
- Great for businesses, rental properties and seasonal homes



U.S. Patent No.
D874,960



Learn more by watching our video at www.sjerrhombus.com



into was digging graves. I had done a cemetery expansion where you put the crypts in. It was proposed to me that it was just like septic work because you're excavating the site and setting concrete vaults. So that wasn't bad, but afterwards I started doing the grave openings and that was something I was real sorry I got involved in. It's not something you can plan ahead of time so you might get pulled off of another job. They don't cancel funerals because of bad weather and I had some terrible situations — 5-inch rainstorms, frozen ground. And you have to set up the tent and the lowering device, and then coordinate with the funeral director who has to be present for the lid closing. You basically spend your whole day there.

The craziest question I've been asked by a customer:

I've had everything from, "Can we flush stink bugs?" to people asking me to cheat on perc tests by digging the holes ahead of time and filling them with good material. What I get all the time is people asking if they can build decks over their systems — which is fine if they listen to me when I say no but nine times out of 10 they don't.

If I could change one industry regulation, it would be:

Prohibiting garbage disposals in private residences, or, if permitted, that it be mandatory to have a grease interceptor on the kitchen waste drain.

Best piece of small business advice I've heard:

Early on I'd complain about tough sites and things, and one of the old

pumpers told me, "The only people who don't have any problems are the people who don't do anything." I took that as, "You'll figure it out, just do it." I also take inspiration from a quote in *Proverbs*: "Entrust your work to the Lord and your plans will succeed." I try to live like that.

If I wasn't working in the wastewater industry, I would:

When I retire, I may continue to do design consulting but I'd like to get involved in some kind of organic food-producing sustainable agriculture. It's basically working with the same principles — taking care of the soil, the water, what Mother Nature gave us, in a way that the next generation can use it. That's how I look at the septic business. I'm more of an environmentalist than a businessman.

Crystal ball time — This is my outlook for the wastewater industry:

What I'd like to see is advanced treatment technologies, aerobic treatment technologies, drip dispersals, become the industry standard, not something considered "alternative." For a few years in Maryland around 2014, they were requiring all new homes to have a BAT system, and then we had a political change and it got kicked back so now those systems only go into areas with poor soil conditions or where it's close to a body of water. But knowing what I know and seeing all the different systems, it's like, if you only knew how much of a difference it makes. □



**FEATURED
IN AN
ARTICLE?**



MAKE THE MOST OF IT!

Reprints available:
Hard copy color reprints
Electronic reprints



Visit onsiteinstaller.com/order/reprint for articles and pricing

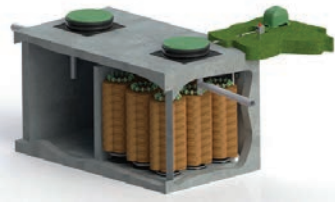
System Repair/Drainfield Rejuvenation

By Craig Mandli

ATUs

Aero-Stream Eco-Nest

Aero-Stream offers NSF-40 Eco-Nest ATUs for flows of 450 to 1,500 gpd. These systems are based on Bio-Brush technology, utilizing an extended aeration/attached growth bacteria process. Each flow rate is available in one, two and three-tank configurations and can be selected based on the desired treatment level. These systems are designed to fit in locally available precast septic tanks with no special configurations. Achieving removal efficiency of more than 90% for BOD and more than 93% for TSS, these systems are simple and energy efficient. The large surface area of the Bio-Brush avoids system upset from biological or hydraulic overloading. The air supply is provided by a weatherproof UL-listed compressor that plugs into a standard 115-volt outlet. The control panel/alarm is battery powered, eliminating the need to hire an electrician for gravity flow systems. 877-254-7093; www.aero-stream.com



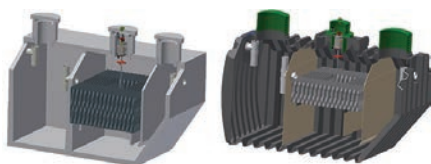
Eljen Geotextile Sand Filter

The GSF, or Geotextile Sand Filter, advanced wastewater treatment and dispersal system from Eljen is designed to provide treatment and dispersal in the same footprint, easy installations and minimal maintenance. It is used for commercial and residential applications. Utilizing a two-stage pretreatment process, the geotextile modules apply filtered septic tank effluent to the soil and increase the long-term acceptance rate. Open-air channels within the module support aerobic bacterial growth on the module's geotextile fabric, surpassing the surface area required for traditional absorption systems. The system is tested and certified by NSF to NSF/ANSI Standard 40. 800-444-1359; www.eljen.com



Jet Inc. J-1500CF Series

The J-1500CF Series nutrient-reducing BAT media plant from Jet Inc. offers variable capacity in an NSF-245-tested treatment system. It provides complete effluent treatment from 500 to 1,500 gpd. The 500 and 800 gpd PLT Series tanks are the lightweight, rotational molded alternative to the concrete J-1500CF Series. The seam-



less polyethylene tanks are easy to transport and install in difficult site conditions. The system uses a 700++ aerator, effluent filter and the Jet 197 control panel, which cycles the aerator to reduce nitrogen by over 60%. 800-321-6960; www.jetincorp.com

MicroSepTec EnviroServer ES



The MicroSepTec EnviroServer ES Series utilizes five chambers to achieve primary settling, treatment and clarification in one tank. The units use a moving-bed biological reactor made

for the residential market. The first compartment of the system is the primary clarifier for settling sludge and solids. The second section houses the first of two aeration chambers and contains biomedica providing surface area to promote a healthy population of microorganisms. The third compartment is used for further aeration to amplify the growth of nitrifying bacteria and the process of nitrification. The fourth chamber is the final clarifier where suspended solids settle out. Wastewater is then recirculated back to the primary clarifier in the first compartment, which contains enough carbon to promote denitrification removing high levels of nitrate. Clarified water then moves through an effluent filter before entering the fifth compartment, an effluent chamber for storage. 877-473-7842; www.microseptec.com

Norweco Singular HK Green

The Singular HK Green wastewater treatment system from Norweco is designed for areas that require significant and consistent reduction of total nitrogen. The hybrid system combines both suspended and attached growth biological processes, and consists of pretreatment, anoxic, aeration and clarification chambers, followed by the Bio-Film Reactor. It uses an extended aeration process to treat wastewater and features technology to enhance or optimize denitrification. Wastewater in the system undergoes a 70-hour retention to ensure adequate exposure to all treatment processes. 800-667-9326; www.norweco.com



Orenco Systems AdvanTex AX-RT Series

The AdvanTex AX-RT Series of advanced wastewater treatment systems from Orenco Systems is designed for system repair and rehabilitation. All interior components are installed, plumbed and adjusted at the factory. Units can be shallowly buried for use between a functional, watertight septic tank and a functioning drainfield. The three-in-one design includes recirculation, treatment and discharge in a single unit to simplify installation and eliminate the need for additional tanks, basins, risers and lids. The system can be maintained with an annual service call. Filters and textile media are accessible and cleanable, and control panels are touch-safe. No blower is needed for the passively vented system. An optional UV disinfection unit is available. 800/348-9843; www.orenco.com



DRAINFIELD COMPONENTS

Prinsco Pro4

Pro4 onsite chambers from Prinsco are a gravelless drainfield solution for residential and commercial septic systems. They are designed to offer delivery convenience, ease of installation, and application flexibility while maximizing drainfield infiltration area. Asymmetrical arches provide maximum structural performance, and interlocking coupler allows for 10 degrees of joint articulation in either direction for contoured trench or bed applications. 800-992-1725; www.prinsco.com



Sim/Tech Filter orifice shields

Orifice shields from Sim/Tech Filter are designed to prevent drain media, such as drain stone, from blocking discharge holes, promoting even distribution of effluent in pressurized systems. The shields have a sturdy design that keeps them firmly in place after snapping them on the laterals, according to the maker. The large amount of open area between the pipe and shield allows for easy placement over the holes and reduces media clogging by debris. The enclosed design has a large amount of open area, but all openings are small enough to prevent media from entering the shield. Two styles are available — for top-discharge distribution holes and bottom-discharge holes. Shields are available to fit 3/4-, 1-, 1 1/4-, 1 1/2-, 2- or 3-inch pipe. 888-999-3290; www.simtechfilter.com



PRESSURE WASHERS AND SPRAYERS

Cam Spray MCB3040

The MCB3040 skid-mount, hot-water pressure washer from Cam Spray is designed to move easily from truck to van to trailer. It offers 4 gpm at 3,000 psi from a Honda GX390 industrial gas engine and triplex plunger pump with ceramic plungers and stainless steel valves. It is equipped with low-pressure chemical injection and is protected by an unloader valve and secondary pressure pop off. The burner system includes a rust-free fuel tank, Schedule 80 coil with stainless steel wrap, is controlled by an adjustable thermostat and temperature limit switch for a maximum temperature of 195 degrees F. The frame is industrial coated 2-inch tubing and comes equipped with a wand/hose rack. A heavy-duty trigger gun with a dual wand and side handle valve allows for the user to switch from high pressure cleaning to detergent application and is equipped with quick change 0-, 15-, 25- and 40-degree nozzles. 800-648-5011; www.camspray.com



SEPTIC SYSTEM BACTERIA

Oatey Hercules Bacta-Life

Hercules Bacta-Life from Oatey is a concentrated powdered product formulated to bacterially repopulate recently pumped septic systems. It is a blend of specialized microbes, potent enzymes, micronutrients and growth accelerators to digest grease, soap scum, starch, proteins, carbohydrates and cellulose/paper. The product disperses quickly on contact with water, and begins to break down deposits and neutralize odors. It contains no acids, caustics or solvents and is safe for use in all areas of wastewater plumbing. It is designed to enhance the natural biology of cesspools, septic tanks and drainage areas, removing heavy buildup in traps, drains, sewers and sump/lift stations when used on a regular basis, according to the maker. Regular use of this product maintains free-flowing drains and sewers and helps keep septic systems at full activity, the company asserts. It can also be used in commercial grease traps, for sewer and drainline maintenance and backyard composting. 800-321-9532; www.oatey.com



SEPTIC DRAINFIELD RESTORATION

Anua BioCoir

The **BioCoir** recirculating media biofilter from **Anua** is designed to be simple to install and easy to operate. It provides stable treatment across a broad range of applications with no constantly running noisy blowers or motors, according to the maker. It uses coconut coir media housed in a preassembled pod. Coir refers to the fibers that make up the thick husk of a coconut. The coconut fiber is low cost, an upcycled resource and high in lignin content, which results in a durable material. Pretreated effluent is time-dosed over the media using helical spray nozzles for uniform distribution. Treatment is optimized by recirculating effluent through the media multiple times. It is certified to NSF/ANSI Standard 40, Class I and third-party tested to reduce nitrogen by more than 50%. Residential and commercial configurations are available. 336-547-9338; www.anuainternational.com



Waterloo Biofilter

Adding highly treated and oxygenated effluent into a failing drainfield can rejuvenate and extend its lifespan, saving installers from disposing of the existing bed and bringing in truckloads of sand. According to the manufacturer, drainfields receiving **Waterloo Biofilter** effluent can function indefinitely because it does not need to treat the wastewater; its purpose is to discharge the treated effluent back into the ground. Damage to a drainfield occurs when sludge and organic material from a septic tank plug the bed or the pipes. A biofilter can be installed in front of an existing drainfield to extend its life and reverse a failing drainfield, or it can be part of a new installation with a much smaller drainfield. The biofilters utilizes a robust filter medium with multiple configurations to suit the needs of every site. 866-366-4329; www.waterloo-biofilter.com



VENT PIPE FILTERS

Pagoda Vent

Vent pipe filters from **Pagoda Vent** provide septic field microbes with the oxygen needed to thrive. They give concrete tanks gas release to mitigate microbial-induced corrosion and provide pressure relief for pumps. They provide proper ventilation, while remaining inconspicuous and attractive in the landscape. The units are durable, lightweight and will not rust. An optional odor filter cartridge using a specialized concentrated media offers years of odor control and fits concealed in the device, according to the maker. 888-864-1468; www.pagodavent.com



Simple Solutions Distributing WVI Inline

The **WVI Inline** activated carbon filter from **Simple Solutions Distributing** is installed in an attic or crawl space inline of the current vent to remove septic odor. The filter comes in 4- and 6-inch sizes, with the smaller able to be bushed down to 1.5-, 2- and 3-inch sizes. It comes with 2 pounds of Sulfursorb Plus activated carbon, which is poured into the 2-inch fill port. The unit accepts an optional screw-in saturation indicator that changes color to indicate when carbon needs to be changed. It is suitable for extreme, cold climates, as it is enclosed in an attic or crawl space. It can be installed in any climate where septic or sewer vent odor exists and the roof vent filter needs to be hidden. 973-846-7817; www.industrialodorcontrol.com



"I like the fact that you can be diversified in the business and still be focused on the wastewater niche market. There are a lot of different things you can do and still be just **septic and sewer guys.**"

Kendall Unruh

Western Septic & Excavation

Buhl, Idaho

Read what **matters** to contractors in every issue of **Onsite Installer**.

Subscribe for FREE at onsiteinstaller.com



WHERE RELATIONSHIPS FLOW

It's been said that a little knowledge is dangerous. But what about a lot of knowledge? Like the chance to learn from the best in the business at nearly 100 live and online educational sessions. When applied to your business these ideas will help you kill it.

But there's more. A lot more. The WWETT Show is the world's largest annual trade show for wastewater and environmental service professionals offering live demos, multiple networking opportunities and an expo floor brimming with the latest technology and innovations in the industry.

Be smart. Join us and thousands of your colleagues in Indianapolis for THE business event of the year.

SAVE THE DATE

WWETT2023

CONFERENCE: FEBRUARY 20-23

EXPO HALL: FEBRUARY 21-23

INDIANA CONVENTION CENTER

WWETTSHOW.COM    



Proud member of:



System Repair/ Drainfield Rejuvenation

By Craig Mandli

Septic enhancement product saves drainfield from ponding



Problem: An installer received a call from a pastor of a rural congregation in Indiana saying the church's drainfield was ponding. The installer determined the drainfield piping was clogged from the biomat.

Solution: A RetroFAST Septic System Enhancement system from BioMicrobics was installed in the church's septic tank. The RetroFAST is an attached-growth biological treatment unit designed to upgrade an underperforming septic system. The biological treatment reduces the biodegradable organic matter in the wastewater and delivers more dissolved oxygen to the drainfield; both improvements help to break up biomat. The compactable unit is inserted in the existing septic tank through a standard 18-inch access. The installation can be completed without heavy machinery, usually in less than half a day.

Result: Within a few months, the drainfield was revitalized, and the ponding disappeared. 800-753-3278; www.biomicrobics.com

System provides town with flexibility for future capacity needs



Problem: Geraldine, Alabama, with a population of 1,100, needed an easy-to-operate wastewater treatment system that could be expanded to accommodate future growth. Additionally, the system needed to treat the entire town's domestic waste to regulatory limits to allow for drip dispersal and handle flow fluctuations to ensure the drip headworks wouldn't clog and to prevent development of excess drainfield biomat.

Solution: An ECOPOD advanced wastewater treatment system with a drip dispersal field was selected for the 60,000 gpd system. The units treat incoming wastewater with an expected strength of approximately 300 mg/L incoming BOD/TSS loading, down to the 30/30 effluent limit requirements. Each home is equipped with a septic tank effluent pump system that moves influent to the ECOPOD treatment system. The system has a flow equalization tank with duplex alternating pumps, four E1600 ECOPOD units installed in parallel, then a dosing chamber with duplex alternating pumps that provide controlled dosing to the dispersal field. Oxygen pumped into the system enables bacteria to thrive in much greater numbers than would occur naturally. This speeds the breakdown of the sewage and making it safe for release into the environment. The entire intra-tank bioreactor treatment system is buried in a cast-in-place concrete tank.

Result: The system was designed with growth capabilities in mind. As the community expands, the cost-effective addition of extra trains will keep the wastewater treatment capacity in line with that growth. 800-219-9183; www.deltatreatment.com

Treatment unit keeps nitrogen levels down on waterfront property



Problem: A waterfront property located on the Tred Avon River in Talbot County Maryland, needed an onsite system. Nitrogen removal within the critical area of tidal waters is a high priority.

Solution: Bay Area Environmental consulted with Jones Pump Service for project design, regulatory management, installation oversight and start up certification. A series of sand beds with Perc-Rite drip dispersal components were used for effluent dispersal. For the three-bedroom home, a

peak flow of 450 gpd was used to design the treatment needs and to size the dispersal beds. A Fuji Clean USA treatment unit was used. Third-party testing has determined that the CEN 5 nitrogen removal average is 76%. A small excavator was able to set the treatment unit because of its compact size and light weight. An Infiltrator dose tank provides storage for the Perc-Rite dispersal pump system. The complete system was installed by CH Tyler Excavating and a Doosan DX63 mini-excavator was used to set the Infiltrator dose tank and the Fuji Clean CEN5.

Result: The treatment unit performed as advertised, keeping nitrogen dispersal substantially below allowable limits. 207-406-2927; www.fujicleanusa.com

Septic pipe cover provides aesthetic solution in garden area



Problem: A Massachusetts homeowner spent thousands of dollars on a new porch and landscaping, only to have a 3-foot-tall vent pipe next to his porch in the middle of his garden. Traditional vent filters only addressed the odor problem, not the aesthetics.

Solution: Kevin Orlando from All Season Septic in Stoughton, Massachusetts, was scheduled to pump the system, and the homeowner informed him of the problem. Orlando suggested The Dirty Bird septic pipe cover. The product addresses odor problems with an included charcoal filter, comes in three colors and fits into the landscape as a common yard ornament, a pedestal/birdbath.

Result: Grateful for a simple solution, the homeowner has a focal point instead of an eyesore. Guests don't even know he has a vent in his yard, and Orlando can service the charcoal filter when he pumps the system. 866-968-9668; www.thedirtybird.com 

Serving the Industry

Visit your state and provincial trade associations

ALABAMA

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

ARIZONA

Arizona Onsite Wastewater Reclamation 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.georgiaonsitewastewater.com;
706-407-2552

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.org

INDIANA

Indiana Onsite Waste Water Professionals Association;
www.iowpa.org; 317-965-1859

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

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

MISSISSIPPI

Mississippi Pumpers Association;
www.msumpersassociation.com;
601-249-2066

MISSOURI

Missouri Smallflows Organization;
www.mosmallflows.org; 417-631-4027

NEBRASKA

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

NEW ENGLAND

Yankee Onsite Wastewater Association;
(Massachusetts, Connecticut, Maine, New Hampshire, Rhode Island and Vermont)
www.yankeeonsite.org; 781-939-5710

NEW HAMPSHIRE

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

Granite State Onsite Wastewater Association;
www.gsdia.org; 603-228-1231

NEW MEXICO

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

NEW YORK

Long Island Liquid Waste Association, Inc.;
www.lilwa.org; 631-585-0448

NORTH CAROLINA

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

NORTH DAKOTA

North Dakota Onsite Wastewater Recycling Association
701-650-8792

OHIO

Ohio Onsite Wastewater Association;
www.ohioonsite.org; 740-828-3000

OKLAHOMA

Oklahoma Onsite Wastewater Association,
918-727-7113

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.pasma.net; 717-763-7762

TENNESSEE

Tennessee Onsite Wastewater Association;
www.tnonsite.org

TEXAS

Texas On-Site Wastewater Association;
www.txowa.org; 409-718-0645

Education 4 Onsite Wastewater Management;
www.e4owm.com; 713-774-6694

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; 888-782-6815

Wisconsin Liquid Waste Carriers Association;
www.wlwca.com; 888-782-6815

NATIONAL

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

ONSITE installer classifieds

Place your ad online at: www.onsiteinstaller.com

BUSINESSES

www.RooterMan.com. Franchises available with low flat fee. New concept. Visit web site or call **800-700-8062.** (PBM)

ROLL-OFF TRAILERS

2001 ESP Roll-off trailer: Two (2) container roll-off trailer good brakes, tires, frame, etc. KLM Companies **617-909-9044.** (PBM)

TOOLS

Crust Busters - Portable, lightweight machine guaranteed to mix up septic tanks and grease traps! Save time and money! **www.crustbusters.com,** 888-878-2296. (PBM)

HAVE SOMETHING TO SELL?
LIST IT IN THE PAGES OF
ONSITE INSTALLER
AND ONLINE!

[onsiteinstaller.com/
classifieds/place_ad](http://onsiteinstaller.com/classifieds/place_ad)



National Onsite Wastewater Recycling Association;
www.nowra.org; 978-496-1800

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

British Columbia Onsite Wastewater Association;
www.bcossa.org; 778-432-2120

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

Onsite Wastewater Systems Installers of Manitoba, Inc.;
www.owsim.com; 204-771-0455

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 ☐

If you would like your wastewater trade association added to this list, send contact information to editor@onsiteinstaller.com



COMPANIES NEED
Fresh Content
TO STAY RELEVANT..
LOTS OF IT.

Trying to handle all of that on your own can be daunting.

That's why you need COLE Media.

Useful, organized, cross-platform content is the key to a successful marketing strategy. Our content generation team specializes in custom-built, affordable solutions exclusively tailored to fit your needs.

Digital & Print Media

- » Website content «
- » Blog posts & customer education materials «
- » Press materials - products, industry, personnel «
- » Social media management & marketing «
- » Email marketing «
- » Hired professional photography & videography «

Creative Content

- » Logo & business card design «
- » Outside creative (advertisements, billboards, digital) «
- » Catalogs & brochures «
- » Video editing «

COLEmedia

www.cole-media.com

info@cole-media.com

SIM/TECH FILTER
Toll Free 888-999-3290

STF-100 series pressure filter

- » 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

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

www.simtechfilter.com


FINISH THE JOB!

Don't Dig Extra Feet of Trench to Get the Vent Out of Sight



THE DIRTY BIRD
Designed To Vent

866-968-9668 | www.thedirtybird.com



Wolverine Filters, now with a built-in end-of-service-life indicator.

Simple Solutions DISTRIBUTING LLC
866-NO-STINK (866-667-8465)
973-846-7817 in NJ
sales@industrialodorcontrol.com
IndustrialOdorControl.com

Fresh Content

IS KEY TO YOUR COMPANY'S MARKETING STRATEGY...

LOTS OF IT.

COLE Media's content generation team specializes in custom-built, affordable solutions exclusively tailored to fit your needs.

COLEmedia
800.257.7222 | cole-media.com

1



GET EMAIL NEWS ALERTS FOR

ONSITE installer

Go to OnsiteInstaller.com/alerts and get started today!



Receive Email News Alerts At OnsiteInstaller.com/alerts

ONSITE installer

PRODUCT NEWS

PRODUCT SPOTLIGHT

Package system is an answer to customer demand

By Tim Dobbins

Sewage and grinder systems have made moving wastewater from low elevations or difficult areas possible for a long time, and Zoeller Company is not new to the market. However, the company has recently added improvements to its preassembled 24x24 sewage and grinder package systems.



“Zoeller did an update to the aesthetics and functionality of the cover on top of the 24x24 package system,” says BJ Hentrup, marketing manager for Zoeller. “The new look is more aesthetically pleasing and the removable inspection cover improves functionality.”

System packages include a 2-inch solids sewage ejector or a grinder pump, a 24-by-24-inch poly-molded basin, a polystructural foam cover with 2-inch vent and an internal 2-inch PVC discharge pipe.

Various pumps are available in multiple horsepower options from 4/10 to 1/2 hp. They are manufactured from cast iron or thermoplastic, depending on the model, and automatic or piggyback configuration is offered. Pumps also come equipped with thermal overload protection and utilize a nonclogging, plastic or bronze vortex impeller.

According to Hentrup, the redesign of the cover was made possible by conversations they had with installers using the previous system in the field. Since the update was made, Hentrup says feedback has been tremendous. “Our customers and installers have been waiting for something like this cover redesign for a while, and we are excited to finally have it out there.”

Users will now find a removable access port for quick inspection and maintenance with no bolts to remove to access the internals. The sewage and grinder packages also feature a removable spring-loaded PVC float tree for easy inspection of the floats.

The basin features molded torque stops for added pump support. At only 24 inches deep, it can be used in shallow-burial applications or troublesome areas. The basin can hold 41 gallons with 25-gallon capacity below a 4-inch inlet. Zoeller utilizes an anti-floating device as well as a 360-degree molded handle as a secondary AFD to keep the systems in place. Each unit comes equipped with a high-water alarm and is fully assembled.

Each unit is shipped with a clear cover to protect the system during installation and construction, and they are built to be stackable for efficient shipping and storage. 800-928-7867; www.zoellerpumps.com □



**Don't let your next install
come back to haunt you!**



Innovative Onsite Products and Solutions Since 1970

eljen.com



All Roads Lead To Polylok



POLYLOK™ Inc.
Innovations in Precast, Drainage
& Wastewater Products



Zabel®
A Division of Polylok Inc.

Polylok 24" Rhino (10 Hole) Distribution Box

The Polylok 24" Rhino Box makes even the toughest applications a breeze with its strength and versatility. The Rhino Box has ten potential openings making it great for any drain field application. Polylok's 24" stackable riser system can be used to easily bring the Rhino Box to grade. The Rhino Box will accept 2", 3", 4" & 6" pipe.

WE ARE YOUR TRUSTED ONSITE WASTEWATER PARTNER!



Visit our website for our complete line of more than 200 onsite wastewater & drainage products.

www.polylok.com / 1-877-765-9565