

THE ZABEL ZONE[®]

THE ONSITE WASTEWATER MAGAZINE

Fall 2001
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Protecting our Environment

NEW

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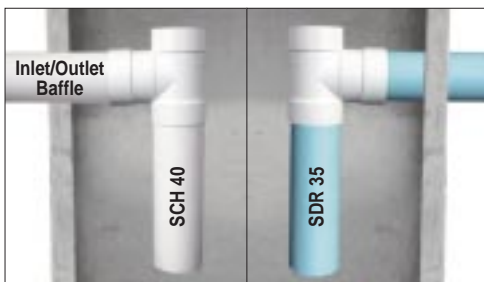


Patent Pending

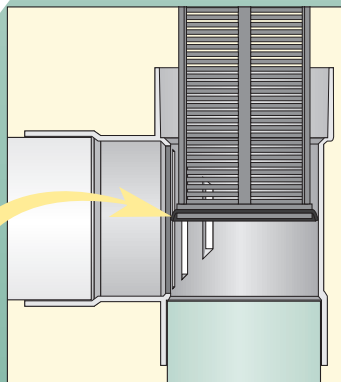
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Editorial Policies

The Zabel Zone® is published in three editions each year and contains articles of interest to the Onsite Wastewater Community as well as information on Zabel products.

The Onsite Wastewater Community does not exist in a vacuum, but is part of the larger culture. Articles may also appear of a general interest that do not directly involve onsite wastewater issues. Articles by guest authors reflect only their opinions and do not necessarily reflect the opinion of the editor.

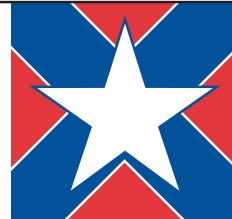
Letters to the Editor will be published as space allows with the editor reserving the right to edit the letters for brevity and clarity. If you would like to contribute an article, please contact the editor at : Voice 1-800-221-5742 - Fax 502-992-8201, or - Email Jnurse@zabelzone.com

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By Harry L. Nurse Jr.

Rebel's Corner



King George III and members of the British parliament said the first American revolution was an act of rebellion against the legitimate government of England and called the American patriots by the derogatory term, rebels.

Rebel is also the name the northern press called the Southern states that declared their independence from a central government that refused to abide by the terms of the U.S. Constitution. Southerners believed the Confederate States of America (CSA) was the legitimate successor to

American constitutional government and with few changes brought the constitution with them along with their version of the original continental flag.

At first they hated being called rebels, but over time they wore the name with pride remembering it was a name first worn by their forefathers.

Being a rebel is not always something of which to be proud. Mankind rebelled against God and the price paid for that rebellion was the suffering and death of Jesus Christ.

At Antioch, the followers of

Jesus were first called Christians. It was not meant as a compliment for it meant 'little Christs' - as in 'here come those 'little Christs' causing disruption. But over time the followers of Christ turned the name into one they bore with honor.

As the descendant of Southerners that fought in the first and second American revolution I have always worn the name rebel with pride, but in my relationship with God I would much rather be called Christian.

At least that is one rebellion this rebel is proud to have lost.

Nikon

AX - 1

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Editor's Corner



My five-year-old sometimes starts conversations with me like this: "I've got good news and bad news. Which do you want first?" I usually choose the bad news, so here goes. After this issue, we will be charging a yearly subscription fee for *The Zabel Zone*®.

Now for lots of good news! The rate will be a mere nine dollars per year or two years for fifteen dollars. For all three issues of our magazine! What a bargain. More good news- if you are a customer who purchases \$100 per year or more, your subscription is free.

This is a move we have debated for a long while. It is very expensive to generate a magazine of the quality you have come to expect from all things Zabel®. So, we are asking you, our readers, to contribute pennies a day to help us defray this cost.

In return, we will keep sending you our one-of-a-kind onsite 'info magazine'. What a deal. In truth, the only bad news is that the editor doesn't get a raise.



Jan M. Nurse, DMD

"Rebel Humor"

You Might Be In A Country Church If ---

The call to worship is, "Ya'll come on in."

The men debate whether the fish Jesus used to feed the 5,000 catfish.

The preacher says, " Bubba come help with the offering" and up.

The restroom is outside.

Opening day of deer hunting season is recognized as an official

A member request to be buried in his four wheel drive truck because he has never been in no hole it couldn't get me out of."

Never in its entire 100 year history has one of its preachers had to eat or vegetables.

The church directory doesn't have any last names.

Four generations of one family sit together in worship every Sunday

The only time people lock their cars in the parking lot is during the winter only so their neighbors can't leave them a bag of squash.

There is no such thing as a "secret" sin.

You miss worship one Sunday morning and by two o'clock that afternoon you will have called asking about your health.

Author unknown, found on the internet



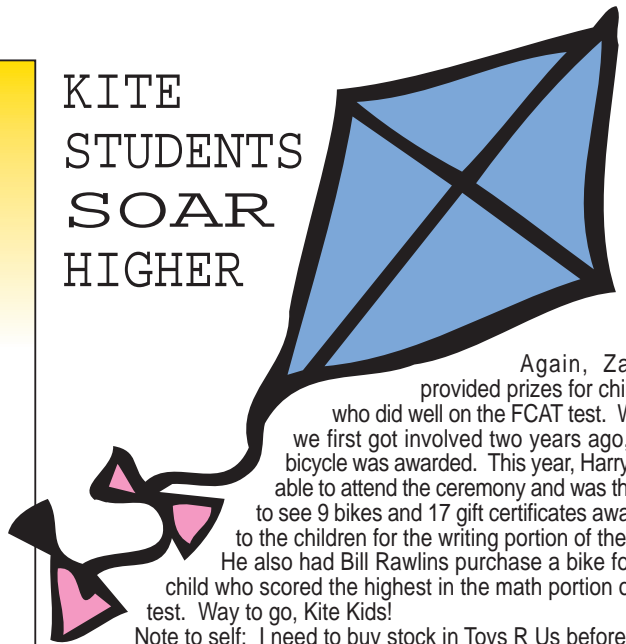
A Better way to Pump

A Zabel® Filtered Pump Vault prevents large solids from entering and damaging your pump. It also eliminates the need for a pump tank.



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KITE STUDENTS SOAR HIGHER



Again, Zabel® provided prizes for children who did well on the FCAT test. When we first got involved two years ago, one bicycle was awarded. This year, Harry was able to attend the ceremony and was thrilled to see 9 bikes and 17 gift certificates awarded to the children for the writing portion of the test. He also had Bill Rawlins purchase a bike for the child who scored the highest in the math portion of the test. Way to go, Kite Kids!

Note to self: I need to buy stock in Toys R Us before next year.

Dear Mr. Rawlins and Mr. Nurse,

When I first started my papers stunk, but when I found out I made a 4.0 I was proud. . .
Sincerely, Andrew

I've been working so hard at my writing but I didn't know where it would take me. Right now I'm thinking about being a book publisher and writer.
Sincerely, Amber

I worked hard on the FCAT writing test and in return you gave me a bike. What a nice thing to do!
Sincerely, Kalyn Swint

When I found out that I was getting a \$50 gift certificate, I almost fainted.
Sincerely, Michael

This letter was not my idea but now that I am writing this letter I thought of ways to thank you.
Sincerely, your bike winner, litaly



THE HOLTVILLE HIGH SCHOOL BOOSTER CLUB

March 8, 2001

Mr. Bill Rawlins
101 Mill Creek Lane
Ponte Vedra Beach, Florida 32082

Dear Mr. Rawlins:

The parents, teachers, and students of Holtville High School want to express our appreciation to you and Zahed Environmental for the STEP system for our new baseball/softball complex. This system allows the restroom and concession stands to be pumped to the existing Middle School onsite system and saves us the expense of an additional and very expensive onsite system just for the complex.

You went to a great deal of time, expense, and trouble to come to Holtville and actually install the system for us. This is truly going the extra mile and we appreciate it.

Sincerely,

John Arant
John Arant, President
Holtville High School Booster Club

Toot your horn



HOLTVILLE HIGH SCHOOL

10425 Holtville Road • Demoville, Alabama 36022
Phone: (334) 968-3034 • Fax: (334) 968-1011

Richard E. Danks
Principal

March 8, 2001

Mr. Bill Rawlins
101 Mill Creek Lane
Ponte Vedra Beach, FL 32082

Dear Mr. Rawlins:

As principal at Holtville High School I would like to thank you for the contribution and installation of the STEP system for our new baseball and softball complex. We are a rural school and all athletic facilities are funded by local school contributions. Parents and community members are the driving force behind the development of our new fields, so contributions of any nature are appreciated, especially a state of the art septic system.

I appreciate your willingness to visit Holtville High School during rainy weather and install a septic pump. Hopefully, on your next visit we'll have reserviors available and no portable toilets. And you, my cafeteria manager won't be pleased that you decided against installing the stainless steel pans. Again thank you for your help our whole community benefits.

Sincerely,

Richard E. Danks

Debbie L. Danks
Assistant Principal



Bill Rawlins a.k.a. *Make it Happen*
Senior Environmental Specialist
Keep up the great work Bill!

You can contact Bill at 904-699-2153



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If It Ain't Broke...

Break It!



1956



1963

I'm sure we've all heard the old saying, "If it ain't broke, don't fix it!" Well, former University of Kentucky and current University of Louisville basketball coach Rick Pitino, has his own version: "If it ain't broke, break it!" He warns against embracing success. For a basketball team to be successful, it must constantly re-invent itself.

Well, the same philosophy can be applied to Zabel® and our approach to the onsite market. For the past 40 years, the A100/300 filters have been the standard by which all other effluent filters have been measured. But rather than sitting back and embracing the success these filters have enjoyed over the past four decades, we have decided to break out of the old mold and into a new improved design.

The process started with the introduction of the 8-inch version of the A100/300 disc-dam filter in the spring of 2000. That filter came with such added features as the multiple-outlet pipe connector, built-in extension adapter, secondary weir and multiple filter lengths. (See the article, "Zabel Reinvents the Famous A100/300 Disc-Dam Filter" in the Spring 2000 issue of *The Zabel Zone*®.)

All of the new features of the 8-inch versions of the A100/300 filter are now available in the new 12-inch models. In addition, the following new features have been added as the result of our ongoing quest to ensure that our products

are the best available in the onsite market.

The built-in filter screen technology, which was introduced with the new Versa-Tee™ in the spring of 2001, is now available in the 12-inch versions of the A100/300 filters. (Reference the article, "Filtered Tee", in the Spring 2001 issue of *The Zabel Zone* The new Versa-Case™ comes with the option of filter slots on the outlet for by-pass protection during routine servicing of the filter cartridge.

The central support system, holding the individual disc-dam plates together to form the filter cartridge that was introduced in the fall of 2000, has also undergone some improvements. The new handle clearly identifies the quality Zabel Filter on the other end, even before the filter cartridge is removed from the tank. Once removed, the cartridge can be disassembled, if a more thorough cleaning is desired. This is easily accomplished by grasping and holding the new support cap on the bottom of the cartridge while turning the handle counter-clockwise to unthread the central support system.

The individual disc-dam plates have also undergone some changes. The plates are larger, a full 12 inches in diameter in comparison to the old 9-



1999



2001

inch version.

This allows for more settling area and increases the linear feet of weir per plate. In addition, a central column has been added to each plate to house the central support system. This central column also acts to insure proper spacing between individual filter plates.

By Theo Terry, RS

So there you have it. Zabel "broke the mold", so to speak, to bring you an even easier and more efficient effluent filter with the new improved A100/300.



What Does



define as a "Residential Wastewater Treatment System"?

By Tom Bruursema



There are many residential wastewater treatment systems on the market today, with many different ways in which they are defined - alternative, innovative, experimental, proprietary, and others. Within each of these are even further subcategories, such as activated sludge, fixed film, trickling filter, sequencing batch reactors, packed media bed, etc., etc. Then there are those that cross between categories with multi-stage treatment processes. All of this is interesting conversation, but for the most part academic. What really matters is does the product adequately treat waste, what's the cost, maintenance needs, installation issues, aesthetic qualities (noise, number of risers), etc. In other words, the content of the black box is important to know and understand, but it's not what matters most to the consumer, to public health and to the environment.

As a means to provide for a standardized measure of performance for such

treatment systems, a committee was established by NSF International (formerly National Sanitation Foundation) in the late 1960's to develop these performance standards. In November of 1970 NSF adopted the first edition of NSF Standard 40 entitled "Individual Aerobic Wastewater Treatment Plants." There was little need to consider other technologies, as most products in the market were "classic" aerobic plants, i.e. those that forcibly introduced air through either an aerator or a compressor. It is important to note though that the definition of an "individual aerobic wastewater treatment plant" never existed in Standard 40.

Throughout the '70s and '80s a number of aerobic plants were tested and many of those received NSF Certification. Regulatory officials were provided with a level of confidence in product performance, and the industry was able to avoid region-by-region testing of their product.

activated sludge
alternative
experimental
fixed film

It wasn't until 1990 that the scope of Standard 40 would be challenged. The product was the Bioclere system, manufactured by Ekofinn Limited. This treatment system did not forcibly introduce air, but rather treated waste by distributing wastewater over a bed of loosely packed media. Clearly air was necessary for the treatment process, and thus could arguably be called an "aerobic treatment plant," yet it was determined to be outside the scope of Standard 40. The product was tested to a protocol with similarity to Standard 40, and was certified under NSF Criteria C-9 "Evaluation of Special Processes or Devices Used in Treating Wastewater" rather than Standard 40.

Standard 40 underwent several revisions during which the title and scope remained unchanged, including the November 1978, May 1983, and July 1990 editions. All technologies tested during this 25-year period were systems

minimum had limited impact, as it was viewed largely as establishing the range that already existed in the marketplace.

The more significant change to the 1996 edition was in the title. For the first time in more than 25 years, Standard 40 transitioned from "Individual Aerobic Wastewater Treatment Plants" to "Residential Wastewater Treatment Systems." It was becoming more and more obvious that the range of treatment technologies, though still predominantly forced air systems, was growing. Discussions at the standard setting

collect a sample of the treated effluent. Second, the product must have a rated treatment capacity of between 400 and 1,500 gpd. Any system meeting these two criteria can be tested to Standard 40.

The need for onsite residential wastewater treatment systems continues to expand, increasing the number and variety of technologies. The drivers continue to be the often cost prohibitive option of municipal treatment, and the inability of conventional septic tank/drainfield technologies to function in many areas.

Having a means by which products can be tested to a National Standard, avoiding repeated, costly testing at the local level, will help these products to gain a more rapid entry into the marketplace.

Many more issues will drive the ultimate success of products, including initial cost, energy consumption, noise levels, size and number of risers, etc.

essentially designed to mechanically force air into the treatment process.

It was the May 1996 edition that brought change in several ways. First, the scope of treatment capacity was changed. Prior to the 1996 edition any "individual aerobic wastewater treatment plant" with a maximum treatment capacity of 1,500 gallons per day (gpd) could be tested. Beginning with the May 1996 edition, the maximum of 1,500 gpd remained, but a minimum flow of 400 gpd was introduced. Reference to 400 gpd first came in the July 1990 edition, but was not specifically mentioned in the scope. Instead, it was referenced in the test method and dealt more with issues of scale and selection of the appropriate product for testing. Overall, the introduction of the 400 gpd

committee concluded that many of these new technologies could and should be tested to Standard 40, and that the same test protocol was applicable.

Since that time NSF has seen many more technologies tested to Standard 40, including other trickling filters, sequencing batch reactors, and various treatment systems incorporating different media types. There are still more under test that will further expand this list.

The scope of Standard 40 is now quite simple. There are two criteria. First, the product must have a single, defined point of discharge. This is necessary to

These issues, however, are easily evaluated without the need for extensive testing. Conversely, demonstration of treatment performance can only come through extensive, independent testing.

In summary, having a single, national standard as a basis for demonstrating performance of residential wastewater treatment systems provides a reliable, consistent source of performance data. This data will provide the information needed by users, regulators and, increasingly, management entities to allow them to make decisions that will reduce the risk to public health and the environment.



Zabel's® Helping Hands program, the brainchild of Bill Rawlins, Jr., Southeastern Environmental Specialist, continues to provide assistance for homeowners who cannot afford to repair their failing septic system. Bill says, "The Helping Hands program is designed to provide Zabel products and services to those who can least afford and most often need them."



BLACK BELT ONSITE SEWAGE DEMONSTRATION PROGRAM

By Bill Rawlins

Great things are happening in the state of Alabama! Once again, those in need have been given a Helping Hand by the wastewater industry. The Alabama State Department of Environmental Health, in conjunction with the Alabama Onsite Wastewater Training Center (located at the University of West Alabama), requested and was awarded a 319 grant from the EPA. This grant, known as the Black Belt Onsite Sewage Demonstration Program, was awarded because of the continuous failure of onsite systems in the Black Belt Region of Alabama and because homeowners were unable to afford replacement or repair of their systems.

John-Paul O'Driscoll from the Alabama Department of Health and Alan Tartt from the Onsite Training Center will coordinate the grant. Its purpose is to update failing conventional systems and to prevent premature failures in systems located in difficult areas of the state by replacing them with new technology. The Black Belt Region is an area in Alabama known for poor soil quality and a high failure rate of onsite systems.

Local health departments selected the systems to be replaced and required owners to pay a small qualification fee. While the systems were paid for by the grants, it took many hours of volunteer time by dedicated people to install them. Not only private companies, but also the local and state health departments gave a helping hand.

As one of the newest advancements in technology, Zabel's AeroCell™ with drip disposal was selected for installation at one of the most difficult sites with very poor soil. The existing system had been in need of major



repair for a long time, but the owner was unable to repair it properly. We are happy to report the installation was a success and once again Zabel proved our products meet the toughest standards. The AeroCell is suited for the most difficult sites including confined areas, poor soil conditions and environmentally sensitive areas.



Through programs like the Black Belt Onsite Sewage Program, Zabel continues to support the environment with effective and dependable products for the onsite industry. We are also proud to help health departments. Zabel is committed to protecting the environment for future generations - one installation at a time.



Looks like these two have been spending
entirely too much time together!



Reguli

We all know them. We all deal with them. Many of us are them. They have a job to do and the way they do it determines how business is done in their jurisdiction. Just as in any other walk of life, regulators come in all different flavors. Some are knowledgeable; some are not. Some are easy to work with; some are a real pain. Some are reasonable; some are just plain psycho. We thought it would be useful for the rest of us (and the regulators, too!) to take a look at who onsite regulators really are, how they can help you and how to avoid the pitfalls of dealing with them. So get ready, you're going to read about...

the GOOD, the BAD, and the UGLY

By Paul Chase and Kevin Sherman

Common Species of Regulators



The White Knight “Out to save the world...from you!”

Common characteristics: Found at all levels-federal, state, and local. Has a strong public health and consumer protection agenda: skeptical of contractors, dealers and manufacturers, especially those who make outlandish claims. **Strategies:** Don't lie! Level with them. They'll appreciate the honesty. Try to convince them that you share their concerns for public health and the consumer. Be thorough, friendly and accommodating. If you handle it right, they can be your biggest supporters.



The Tin Horn Sheriff “Not in my jurisdiction!”

Common characteristics: Found mostly at the local level. Has a strong ego and can be difficult to deal with. Feels the situation in his territory is unique to the world and the only solutions that will work are those he thinks will work. **Strategies:** Suck up to them. Acknowledge their authority and try to convince them that what you want to do will work in their jurisdiction.



The Bookworm “It's not in the code!”

Common characteristics: Found at all levels-federal, state, and local, although you find more of them at the federal and state level. They generally don't care as much about what works as they do about what's legal, i.e., in the code. **Strategies:** Know the code before you talk to them. If what you're doing complies with their code, no sweat. If what you're doing is not in their code, you are going to run into trouble. Read up on variances and experimental use provisions.



The Technocrat
Pushing the envelope on your dime!

Common characteristics: Found at all levels-federal, state, and local. Is very knowledgeable and usually easy to deal with. Technocrats like to tinker and they aren't married to the regulations.

Strategies: Be careful! While dealing with technocrats can be a fun ride, make sure you have your ducks in order. They tend to write articles and do a lot of presentations at conferences, so you want to make sure whatever you are doing works. It's also helpful to work it so the technocrat feels like a star after it's all over. Finally, take care that they don't talk you into something that will cost you a fortune. They have no funds for research and are always on the prowl.

Latexes

Onsite wastewater is a regulated industry. As such, you need to deal with regulators- no way around it. Knowing about the particular regulator you have to deal with or the culture that pervades their regulatory agency can help you in dealing with them.

Most regulators are decent people who are out to help anyone that they do business with. Even if they have an agenda, their hearts are usually in the right place. It is also true that regulators can be most unhelpful if they choose and how they deal with you is mostly determined by the approach you take with them. There are a few psycho-regulators out there that make life miserable no matter how you approach them, but they are few and far between. If you follow the Golden Rule, most of the time you will be all right.

Each regulator is different, but they all share common characteristics. This body of general characteristics can be described in terms of general rules for dealing with them. These rules must be followed in dealing with all regulators. In addition, regulators can be classified into types. Once you figure out what type of regulator they are, there are strategies you can employ that will make it easier to work with them and may actually result in them being more helpful than you expected.



The Psycho-Regulator
Uh-oh!

Common characteristics: Found mostly at the local level. Is completely unpredictable and virtually impossible to deal with effectively. Some are clever and hard to spot. They will try to suck you into their web. Others are clearly nuts and wear their dysfunction on their sleeve.

Strategies: Steer clear. These folks are trouble and if you mess with them, you'll regret it. Sometimes you can wait it out. Psycho-regulators usually don't last very long in their position.



The Nit-Wit
Dumb as a post and in charge!

Common characteristics: Found at all areas of government but mostly at the local level. The nit-wit's major characteristics are ignorance and incompetence. Many are lazy. Others are well-meaning, but are not up to the task. The reason they are there is because they knew somebody and that somebody wanted to keep them off the welfare rolls. **Strategies:** Work with them, try to educate them – but don't get your hopes up. If you are lucky, they'll go along with what you want to do. If not, it's a hard and frustrating road.



The Average Regulator

Common characteristics: Found at all levels of government. Hard-working, honest, helpful. Most regulators fall into this category. Generally, they are reasonable people who are trying to do a job, usually under adverse conditions. **Strategies:** Deal with them as you would deal with anyone. Most of the time it will work out.

Continued on page 17

"In My Opinion"



By Charles E. Luther, R.E.H.S.



I was asked by Bill Rawlins of Zabel® to provide my thoughts and opinions about the future of onsite systems in the U.S., and as we all know, regulators love to give their opinions! I know much has been written about the future of onsite systems. What needs to be done? How can we correct past mistakes? What research is needed? And how do we all work together to promote the onsite industry? So, what more could a regulator like me add to this debate? Well, I will try to give insight from my observations traveling around the country attending conferences such as NOWRA, ASAE, and NEHA that have extensive and dedicated onsite systems professionals, committees and technical advisory staff.

As a public health professional with 20 years of onsite program experience, I have seen many changes. In fact, it seems the industry changes daily in terms of technological advances and research information that gives us greater insight into how these systems work, and how to make them work better, last longer and provide the owner with minimum maintenance and operational headaches. Staff at the Volusia County Health Department is never sure what technology they will see when they go out in the field to inspect a system, whereas, when I started, it was always a concrete tank with four-inch laterals running through some type of aggregate. Now days, at least in Florida, an environmental health specialist might see a gravelless system of some type, a dosed system, an Aerobic Treatment Unit, peat based treatment system, drip irrigation and even some type of site specific engineered Performance Base Treatment System. This requires the typical health department inspector to be constantly reading the latest product literature and meeting with industry representatives to understand how their products work and how they should be installed and maintained. Continuing education is necessary for all who work in this industry, and in the case of installers, it's needed to stay competitive.

"I see the need for regulators to see the contractors, installers, builders and citizens that apply for an onsite system as customers that deserve our best service."

It has become clear to me while serving on the NOWRA board of directors, and on the NEHA Advisory Committee for the EPA Outreach Project grant regarding decentralized system management, that onsite systems are here to stay. In addition, we are in this together and must work to promote the industry, while protecting the environment and public health. Big pipe systems, besides being expensive to build and operate, are not the goal anymore. They have their share of problems: pipe breaks and leaks, spills and overflows and violations of discharge standards due to peak flows and lack of proper management and operation. Don't get me wrong, there are areas where I feel the sewer is the better alternative, but only if they recycle the water back to the ground and not into rivers, oceans or other water bodies. In my opinion, onsite systems do a much better job of groundwater recycling and at much less cost to the owner than a sewer system.

Speaking of recycling, that is what we really need to get across to the public and legislators. The terms "sewage disposal systems", "septic tank treatment systems", etc., need to be replaced with terms like "Onsite Wastewater Recycling System", or "Onsite Wastewater Treatment and Recycling System". The public needs to understand that when wastewater from their home or business goes down the sink or toilet, it does not simply disappear. It is put back into the ground, and somewhere down the road, someone will be using it again.

They also need to know their wastewater is really 99.9% water! Getting that point planted in peoples' minds will help them understand the importance of properly designed, constructed and maintained systems.

Now, about the future of the onsite industry. First, I see the need for regulators to see the contractors, installers, builders and citizens that apply for an onsite system as

customers that deserve our best service. Those on my side of the fence who are only around to make sure that 'no one gets away with anything', while not caring about time frames, I say, "Find another job." If not, you could find yourself in the situation that recently developed in Dade County, Florida, where the building inspection process was taken away from county government and given to private industry because of lack of timely, effective service to builders and contractors. Also, we should be here to educate. Whenever possible, we need to use education, not citations and legal enforcement tools. Conversely, those on the industry side not wanting to work with public health officials and do the best for their customers and the environment should find another line of work.

We are at the point where we are ready to take onsite systems to the next level by embracing the U.S. EPA's Decentralized Management Outreach program that NEHA is now working to promote via a grant from EPA and NOWRA's Model Performance Code and Model Framework for Unsewered Wastewater Infrastructure. We can no longer just put systems in the ground then not think about them until they fail. We need to require routine maintenance and monitoring. I see that the use of computers and software possibly tied to remote sensing devices, maybe even via satellite, will help to monitor how a system is doing and when it needs attention. Sort of like Star Wars for onsite!

Here at the Volusia County Health Department, we are purchasing hand held ArcPad wireless computers with GIS information regarding soils and property downloaded so staff can save time and provide faster turnaround for permits to our clients. We will also be able to retrieve information in our computer database for our clients without going to any paper files. In addition, we will experiment soon with a web based application and permitting program, so the contractors and other customers may not even need to visit our offices to apply for or receive their permit. And when a property transfer occurs, the new property owner must be aware of the condition of the existing system, just as he wants to be sure the house he is buying is not full of termites or has a leaky roof.

Research must continue in all parts of the country because of the difference in soils and climates to see what works best in specific locations. One size does NOT fit all, and we need varied technologies and products to meet specific needs and locations. We need to move from a Prescriptive Code to a Performance Based Code that is site specific, but in a way that will hold down costs to the consumer.

In summary, by treating our manufacturers, contractors and installers as customers, by embracing the new technology and not saying, "we know what works and we don't need that here", and mandating monitoring and maintenance to prolong system life and prevent sanitary nuisances, the onsite industry will gain a much greater level of respect and acceptance. And who does not like to be respected and accepted? We must continue our efforts to educate the public and government officials and legislators who know little or nothing about onsite systems, and continue our research to improve the onsite system and demonstrate that these are acceptable, manageable and environmentally friendly and safe treatment and recycling devices.

Charles E. Luther, R.E.H.S.
Environmental Manager
Volusia County Health Department
DeLand, Florida

Continued from page 15

The Golden Rules

The general rules for dealing with regulators are as follows:

Rule #1: All regulators have a job to do. Most are aware of their mission (see Rule #2) and take it very seriously. Be respectful of this.

Rule #2: the mission of all regulators is grounded in public health and/or environmental protection. Whatever you bring to them will be framed in this context. Some regulators have additional, usually unstated, agendas and the more you know about them, the better off you are. Consumer protection and limiting development are the most common of these additional agendas.

Rule #3: No matter what a regulator tells you, he or she is bound by the rules just as you are. Although most regulators are allowed to interpret their codes and have some latitude in their area, they are never the final arbiters. Don't play lawyer with them unless you are a lawyer yourself. Most regulators know the rules front to back and will beat you at that game every time.

Rule #4: Regulators are generally reluctant to volunteer information. That does not mean to say they are all unhelpful. It means they are like an oracle: if you ask the right questions, you will find out what you want to know. If you don't know what to ask, regulators are not inclined to lead you by the hand.

Rule #5: When dealing with regulators, don't waste their time. Most are busy and resent intrusions on their time for no good reason. Come in knowing what you're talking about and be able to explain it clearly and concisely. Also, don't make them wait around on a job site. Be ready for them when they show up. This will be greatly appreciated.


Rule #6: If you have trouble with a regulator and go over his or her head, expect trouble from that point on. They are going to play things strictly by the book, for better or worse.

Rule #7: Never bribe a regulator. Most will be insulted and will regard you with contempt from that point on. Regulators who solicit bribes are not to be trusted and should never be paid off. In Florida, state laws prohibit a regulator from accepting a free lunch or even a cup of coffee. Most regulators will not make a scene if you try and pick up a check at a group lunch, but don't be surprised if one does. During the holidays, a small office-wide token of appreciation for their help during the year is not out of line. The best chance of your gift being accepted and used are if it is edible, easily eaten in small portions and prone to spoil. Bring it by the first week in December for maximum use. Some offices automatically take your gifts to nearby orphanages or nursing homes and send you a letter of thanks. In any event, your thoughtfulness is recognized, and the holidays are a little brighter all around.

Rule #8: Never expect special favors. Most regulators will give somebody a break now and then, but if their largesse is expected or abused, they will resent it. This is especially true if you and the regulator are friends.

Rule #9: Be cordial. Most regulators deal with irate people day in and day out. If you are among those giving them a hard time, expect to get lost in the crowd.

Rule #10: The most important rule of all—Be professional. Show regulators the respect they are due and deal with them honestly and forthrightly. They can usually smell a snowball job a mile away and have little patience for dishonesty and incompetence. They are forgiving of honest mistakes, however. If you deal with them professionally, most situations can be resolved amiably.



Got Some Pipe To Lay?

Then you should
read this!

INSTALLER INNOVATIONS

It's simple really. All you have to do is pound, rock, twist and pull. Sounds like the steps to a new dance, doesn't it? But it's actually the only steps needed for installing a stone and pipe leachfield, using the Septic Speed Stick, designed by retired engineer Harry Wilson. And since this handy tool makes installing these leachfields both easier and quicker, a few installers may be dancing for joy!

Wilson, from Columbus, Indiana, retired from the Cummins Engine Company a while back. About three years ago, while helping his son install a septic system at his new house, Wilson became convinced "there had to be a better way"

to construct their pipe and stone leachfield.

Wilson and his son made a set of rebar t-handles to help with the installation of 700 linear feet of trench. "The t-handles worked okay," Wilson said, "but it was difficult to drive them to the correct elevation."

He further explained that it wasn't unusual for the pair to drive the t-handles too deep, and then have to pull them and reset the elevation. "When the ground was hard, it was almost impossible to pull them out by hand," Wilson said.

Then one morning, several months later, the concept of how to design a new pipe stand came to Wilson as he was looking in the mirror, shaving. His idea was to use a pipe stand, but to make it adjustable and able to lock in place at a certain elevation. Making it adjustable means the support stake only needs to be pounded into the ground until a firm support is obtained.

By also incorporating a grade rock bracket, which attaches to the pipe holder, one person using a laser can precisely adjust the pipe elevation without any further pounding on the stake. Once the elevations are set, one simply must put rock in the trench, twist the support stake to move the lower arm from under the pipe, and then pull the stake out of the trench to use on the next finger.

"This new pipe stand system is very accurate and very quick," Wilson said. Checking for accuracy also is easy, he explained, because the upper arm of the Septic Speed Stick remains exposed after putting stone in the trench. "The grade rod bracket can be attached to the upper arm for shooting grade, so it is possible to recheck if you think something has moved before you cover with dirt." There is also a mark on the device, which indicates the correct depth of the rock cover over the pipe.

Wilson began making the device and selling it on a local level in April of 1998. His first customer, Larry Mohr, owner of Larry Mohr Construction, in Flatrock, Indiana, estimates a 30 percent reduction in installation time for the leachfield using the Septic Speed Stick. "I don't think we would put in finger



systems now if we did not use it," joked Mohr.

Another customer, Ralph Reed of Reed Excavating & Septic Systems, bought two sets, one for each of his crews. They install about 80 new systems each year. Wilson said the Septic Speed Sticks are sold in sets of 21 grade sticks, plus the grade rod bracket to mount the grade rod on the sticks. Wilson made the set to apply to Indiana codes, which states 100-foot long trench is the maximum allowed. "Using 21 sticks allows you to place every five feet in a 100-foot trench," Wilson explained.

"I know a lot of installers put supports every 10 feet," Wilson said, "but if you put supports every 5 feet, you don't have to worry the pipe is going to bow when you put stone in the trench. Setting the elevation is so quick with the Septic Speed Sticks, it is well worth the peace of mind knowing you've installed a quality system."

Wilson recently received his patent on the device, and with having tested it for almost two years, he is now ready to sell it beyond the Columbus, Indiana area. For more information or to purchase Septic Speed Stick call Zabel® at 1-800-221-5742.

Then get ready to pound, rock, twist and pull.



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Rock,
Twist,
and
Pull**

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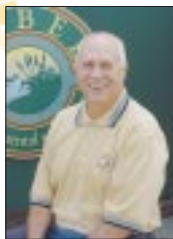


U.S. Patent
5,971,664

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Faces Behind the Phones



Harry Nurse
President



Jan Nurse
Zabel Zone Editor



Theo Terry, R.S.
VP Product Services



Becky Page
VP Business Services



Amy Sparks
Accounts Receivable



Tom Petty
P.G., R.E.H.S.
Environmental Specialist



Bill Rawlins
Environmental
Specialist



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By Brian Borders, R.S.



You see, we are not trying to steal their customers, we are trying to ensure the Installer/Contractor receives the best customer service, best products, and at a fair price. That's all, nothing more.

Fred Astaire/Ginger Rogers and Abbott/Costello are just a couple of the great partnerships our world has known. Zabel® has been working to develop some great partnerships of our own over the past few years. While our partnerships are not as glamorous as Fred and Ginger or as humorous as Abbott and Costello, they are developing into strong and mutually beneficial arrangements. I like to call these customers Strategic Partners.

Ten years ago, when Zabel began to emerge in the onsite industry as a "Filter Company", the majority of our customer base was that of Installer/Contractor. Installers will always be the cornerstone of our product development, advertising, and marketing efforts. They are the key players in our industry and Zabel will always provide them with the ability to receive the best customer service while purchasing the best products

direct from the manufacturer.

I often receive a call from someone who wants to become a Zabel Distributor. My standard response is that Zabel sells direct to everyone and we do not provide a false blanket of protection to a select few. Many times the inquirer says, "You mean you're going to sell my customer direct?" To which I respond, "Only if you make me." You see, we are not trying to steal their customers, we are trying to ensure the Installer/Contractor receives the best customer service, best products, and at a fair price. That's all, nothing more.

Once a reseller makes the decision to view Zabel as a single source provider for all things onsite and shares the Zabel philosophy of selling through education, customer service and support, they then become a Zabel Strategic Partner. This relationship becomes one built

on mutual trust and respect for each other and for OUR customers. Zabel can then help our Strategic Partner to develop their onsite product line and reach their installer contractor base.

Our assistance and support to our Strategic Partners includes:

- Training
- Technical Assistance
- Customer Referrals
- Promotional Items
- Product Literature
- Direct Mail Campaigns

And many more...

Our ultimate goal is to become the single source provider of onsite wastewater equipment in the world. Building strong Strategic Partnerships with the leading industry resellers is yet another way we hope make that a reality. If your organization would like to begin forming a strong partnership with Zabel, please give us a call.



The National Small Flows Clearinghouse (NSFC) has been helping America's small communities with their wastewater treatment issues for more than 20 years. In an effort to send out wastewater-related news more quickly, the National Small Flows Clearinghouse established a listserver to announce NSFC publications, new products, and other information. By subscribing to the NSFC New Listserv, you can receive the latest information about sewage treatment options for homes and small community developments. New information is transmitted to subscribers via e-mail on a regular basis. This listserv is for notification only, and cannot be used for posting messages.

To subscribe to the NSFC News Listserv, all you have to do is send an e-mail to subnsfcnews@mail.nesc.wvu.edu. No additional text is required.

Anyone who works with small communities to help solve wastewater treatment problems can benefit from the NSFC's services, which include more than 450 free and low-cost educational products, a toll-free technical assistance hotline, five computer databases, two free publications, and an online discussion group. For more information, visit NSFC's Web site at http://www.estd.wvu.edu/nsfc/nsfc_index.htm

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A GREAT



Season

By Theo Terry, RS

The 2001 baseball season

has served as a reminder to me about why I got into coaching in the first place. It's not about the "Thrill of Victory" or the "Agony of Defeat." Instead, it's about doing everything in my power to make sure that, 30 years from now, when the players on my team think back to their days in Peanut League baseball, they will remember it fondly.

Hopefully, they will remember it as a time for forming friendships that last a lifetime. Remembering family trips to the various ballparks around our area. Memories of playing in the creek between games at the E'town Park, having a picnic on the side of the hill at the park in Upton, or cooling off in the shade of an ancient oak tree at the ball field in

That's not really all that important. What does matter is the enjoyment of playing the game with friends and being with their families. That's a message that I think was lost on this year's LaRue County Youth Baseball Board.

There were a lot of changes made by the board this year, not the least of which were decisions to "split up" established Peanut League teams and coaching pairs in and effort to "equalize" the league. So, the seven kids that had been together as Dodgers for the last couple of years were re-drafted and divided among the five league teams. It left me with a hollow feeling. I guess that's one of the reasons I tried to fill the void by coaching not one, not even two or three, but four teams in 2001. From T-Ball to Babe Ruth League, I had a hand in coaching a team.

Nine seasons ago, I started out coaching my 7-year-old son Andrew, then on the Braves. And I got the chance to close out his youth baseball career with the White Sox. He had one of his best years individually, and the team finished strong, taking second place in the league. It's going to feel strange next season not having Andrew playing summer league, as he's grown out of the age group to play youth baseball. I'm sure that girls (and maybe a car!) will help fill the void for him. As for me, I'm looking for my yard to get mowed on a more regular basis!

I also had the opportunity to coach my son Theo again, this time in the Minor League for 9- to 10-year-olds. "Moving Up" was a new experience for both of us, as it was the first time he had to face peer pitching, and the first time I helped coach in a league where base stealing and pitching is so important. The Cubs started off slow, losing their first five games. But they finished strong, winning 5 of their final 8 league games, and finished in fourth place in the six-team league. It was kind of a hard year for Theo, as he didn't earn any hits this year, but in the end, he had a good time playing defense in left field, and says he plans on playing again next year.



Emma Grace
(Theo's daughter)

Once again I coached the Dodgers of the Peanut League without a child of my own on the team. I'm holding out hope that common sense will once again prevail, and that the baseball board will re-evaluate their decision to break up the teams each year and allow the 7-year-olds to stay together next season. If that's the case, my daughter, Emma Grace, will move up to join a team with seven Peanut League "veterans." The 2001 Dodgers struggled to become familiar with each other as players, and with the game itself, and finished in fourth place in our league. If allowed to stay together next year, I would expect to see the Dodgers back near the top of the league standings.

Last, but certainly not least, I had the pleasure of once again being an assistant coach with my daughter's team, the Angels. Emma Grace, already a grizzled veteran of four baseball seasons at the tender age of 6, had the best season of anyone in the Terry family. Her team lost the first game of the season, but then went out and won 10 games in a row. For the second year in a row, the Angels made it to the Tournament Championship game, and this year came away with the BIG trophies.



Sonora. They'll remember being a Dodger. And they'll remember having fun.

If those are the memories of their years in Peanut League, then I've accomplished what I set out to do. Not whether they won or lost a game.



ONE OF THE ZABEL® FAMILY OF CUSTOMERS:

Advanced Septic Solutions L.L.C.

Editor's Note: I would like to share a letter sent to Zabel from Melvin and Alicia Childers. It has been somewhat edited for length, but I tried to keep it as complete as possible. You can see why I think Zabel is such a terrific company!

I would like to take this opportunity to thank you once again for all the help and support you have given us. Advanced Septic Solutions, L.L.C., is a small business, but in our area, we are one of the best and we strive hard to make that happen. Our business is very family oriented. Art's our oldest- he's 19 and has been working since he was 12. Caleb is 13 and has been working a couple of years, but is getting strong now and is a lot more help. Cody is 11 and he's got about a year under the belt. One of our most valued employees is Glen English. He works another full time job, but is always there for us. He and his family are our neighbors and good friends.

We have been buying Zabel products for a few years now and always appreciate their knowledge and friendliness.

I remember getting the phone call from Lenny, the ranger at Camp Mintahama. He was without septic, couldn't use the shower, dishwasher, washer . . . needless to say, his wife Norma wanted the problem resolved. While talking with him about the ranger's house, we found



that the camp had problems at their peak last summer and whoever the Ozark Girl Scout Council hired for that job would most likely do the home, too.

In hopes of getting the jobs, we offered to donate the pump tank for the Low Pressure Pipe System we wanted to install for the ranger's house. Karen Morgan, the Executive Director, met with the companies and said she was hiring us because we were so professional and knowledgeable about the product we were wanting to install. She also wanted us to bid on the Camp Mintahama job.

The whole camp job included a dining hall, Grey Squirrel Lodge, the trading post, bunkhouse, pool house and Camp Director/ Health Center. All these

buildings plus the ranger's house had lines running to a 4000-gallon tank and small field. A little detail I forgot to tell you was that Karen needed the bid in 3 days! So, we came home excited and feeling the challenge. We put the numbers together and were concerned at how expensive this job would be to make it work right so the camp would never be on the verge of being shut down again. Afraid we might not get the bid because of the high numbers, Melvin decided to call Theo Terry to find out what we needed to do to ask Zabel for donations. We knew a lot of their parts were going into our installation. We hoped Zabel would be there to help the Girl Scouts. I'm pleased to say that when Melvin called Theo at his home late that night and spoke to him and his wife, Robin, on the speaker phone, he was very confident that Harry Nurse would be more than happy to let Zabel help the Girl Scouts. They were very friendly to Melvin. There aren't too many businesses you feel like you can call up the VP of Government Relations after hours at home and end up feeling like a friend, not a hassle.

So, the next day, we spoke to Brian Borders for the first time. He said they would be glad to help. When we took our bid in 3 days later, we didn't think we would get it, not because we couldn't do the work but that the bids were high, but they were fair. I know I never thought there would be a day that we'd be doing a project with those dollar figures. I told him I felt like we had a really good chance of getting it. When we arrived, our stomachs were in more than just knots. The wait to talk to Karen wasn't long, but seemed like it.

Melvin told her what our plan would be. He told her about trying to get businesses such as Zabel and Charlie and Theresa Wilson of Wilson's Vault to get items donated. The Wilsons offered to donate \$25 per tank and we were looking at using eleven 1500-gallon, two compartment tanks. Melvin gave Karen literature on all the systems we install from the very basic to drip and so on . . . he was doing a great job of selling our workmanship.

After the meeting was over, it was a relief. Now we had to wait for Karen to take it before the board. She indicated



we had a good chance. None of our competitors did the research we did. Our bid was more than the competitors' but when you look at what we were offering to install, we were giving them the better deal. We were just hoping she could make the board see that. It was a great feeling when Lenny called saying, "You got the job!" That's when the real work began.

We went to Nashville for the Pumper Convention and when we stopped by the Zabel booth, it was like a mini reunion because we talked to them over and over on the phone. Melvin started off by telling Brian we had gotten the job and trying to see what all he could count on from Zabel. Up walks Harry, so we begin thanking him for his generosity. By the look on his face I'd say that was the first he'd heard of it, and I wasn't sure it would go the way we hoped. Then he said, "We're always glad to help the Girl Scouts and I'm sure Brian will do you a good deal." And that he did!!!!

The next morning, the speaker at the convention got part of our attention, but we were thinking of the jobs we had to get done before we could start the camp. We were also thinking of products we would need for the job so we could place an order with Zabel at the show and get a discount. We always try to take advantage of the special offers Zabel provides their customers.

After our mini-vacation at the show, we began the job, and I guess before I end



this letter the story needs to be told about when Melvin and Glen were digging at the camp one night around 9:30. One little girl asked her leaders if it was monsters out there. She told her no, but the girl wasn't feeling confident and said, "Will they eat me?" She again told her no, and the little girl's reply was, "But I'm a BROWNIEEEEEEE!" That story puts a big smile on Melvin's face whenever he thinks about it.



Alicia Childers

You all are so very loyal to customers. Thanks for everything you do for us.

Sincerely,
Melvin and
Alicia Childers



Glen English



Melvin Childers



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"ON THE ROAD

...With Zabel®

By Tom Petty, P.G., R.E.H.S.



Rambling ruminations and selected snippets about life, in general, from a roving onsite professional.

When I left my position with the State of Tennessee as a respected (No, really!!) regulator, and began to "see the world" with Zabel, I thought I had seen it all. Boy Howdy, was I wrong. In spite of amazing similarities in the way that regulators and installers do things from state to state, I began to develop an appreciation for some basic concepts in this industry that I had taken for granted for so long.

Virtually all installers have a love/hate relationship with their local regulators, and vice versa. Virtually all installers drop the love part when it comes to dealing with state offices. Virtually all local regulators are overworked, underpaid, misunderstood, frustrated, well-meaning public servants. They want help. Installers want help. Even most state offices want help.

The onsite industry has lacked sufficient organization in the past to effectively provide much help. It was sporadic at best and aimless at least. But now, with the advent of organizations like NOWRA, AIM, and NAWT, the effort has become directed and timely. Regulators, installers, service providers and manufacturers all have a place to go to seek out information and share ideas that help advance the industry.

This sharing of ideas and information is where I have found my niche. I have found my calling. I am a changed man. I have been raised up from the frustrations in my "other" life and found comfort and satisfaction in sharing information. In short, I was born to teach.

Several states and local jurisdictions have continuing education requirements. These requirements have provided opportunities for people to share information and advance the industry. Most regulators will tell you that they enjoy this part of the job, but the trainees get tired of hearing the same stuff from the same people all the time. They will also tell you that installers do not like to attend these meetings. While this may be true in some cases, I have found that these trainees not only like this required activity, they look forward to it. They ask questions. They want to hang around after meetings and talk about their problems. They soak up this information like a sponge and thirst for more.

Zabel, this past year, provided me the opportunity to teach the CEU training for several counties and jurisdictions in Kentucky. After getting our curriculum approved by the State of Kentucky, we advertised the fact that we could provide this training, at no cost to the counties, and the requests poured in.

There are many funny and wonderful stories I could tell about my experiences. It started in December 2000, at Woodford County and ended March 24, 2001, at Ashland Technical College, where I did three training sessions during this period. I do not have the space in this article to relate all of the wonderful things I learned. But I can tell you about a few.

I remember the installer in Carroll County that told us about having the outhouse in his front yard. I had a slide showing an outhouse and he told us about installing a system for someone who had been using an outhouse. They wanted him to tear it down but he asked if he could have it. They said yes, and the rest is history. In his defense, it was virtually new, a two-seater, and now provides wonderful advertising. I still wonder what effect it has had on his marriage.

Then there was an old installer in Hopkins County that found out about my advocacy of LPP systems. When he learned about how many I had permitted, designed and installed, he was my new best friend. In a room full of skeptics, he had found an ally.

I could go on all day. The memories and the knowledge I gained are special to me. But, sadly, there is not room. Call me some time and I will be glad to bend your ear for a few hours.

This brings me to now. We are going to do it again. We are going to offer this training that Kentucky approved for 6 hours of CEU's. It will change this next year because, like I have already said, people don't want to hear the same thing every year. So while we are developing an all new course of non-proprietary onsite training, get your requests in to me for 2002. By the way, this is not limited to Kentucky. I'll go anywhere. My expense account shows it. If you have a need for this training, tell us and we will submit it to whatever jurisdiction for approval. You can contact me directly at tpetty@zabelzone.com or by phone at 615-289-4399, or you can contact Zabel directly at 1-800-221-5742. Ask for Brian or Vanessa. Get your requests in quickly because last year my calendar filled up fast.

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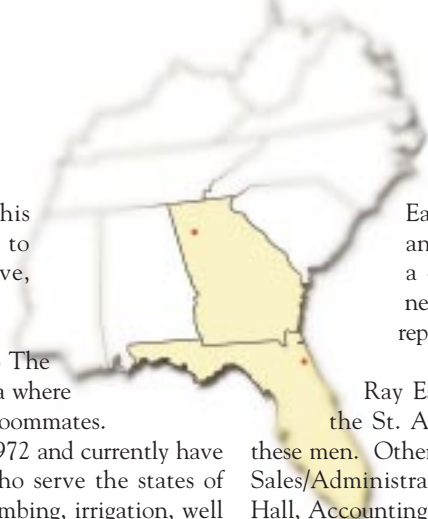
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SPOTLIGHT

ON A ZABEL® MARKETING REPRESENTATIVE



We, at Zabel, would like to take this opportunity to introduce our readers to our newest Marketing Representative, Marsh & Moore, Inc.

The roots of this company go back to The University of West Florida in Pensacola where Mark Marsh and David Moore were roommates.

They established Marsh & Moore in 1972 and currently have 8 outside and 6 inside salespeople who serve the states of Florida and Georgia in the septic, plumbing, irrigation, well supply, pool and industrial utilities markets.

President Mark Marsh heads the corporate office in St. Augustine, Florida, handling the north Florida territory and key management people in all major accounts. Vice President David Moore heads the Kennesaw, Georgia operation and is responsible for all of that state. Richard Bohl, Secretary/Treasurer of Marsh & Moore, operates out of Orlando and handles the central, southeast and southwest Florida territory. There are also sales office in Tampa, Ft. Lauderdale and Tallahassee and 5,000 square foot warehouses located in St. Augustine and Kennesaw.

All three partners work their own territories (Mark Marsh is a pilot who flies for business as well as his own enjoyment) and attend all industry trade shows. They belong to associations such as the PHCC- Florida and Georgia associations, Florida Irrigation Society and the Florida Water Well Association. This keeps them aware of what's going on in the industry.

Another key to their success is their approach to the market. Richard Bohl puts it this way: "There are two ways to cover the plumbing market. You can use a shotgun or a rifle." Marsh & Moore employs the rifle approach, concentrating on one segment of the industry, rather than attempting to cover the entire range of plumbing products.

They have also assembled a team with years of experience in the industry. John Venters has been with Marsh & Moore for 23 years and is based in the southeast Florida area. Steve Hall, out of Tampa, has 31 years in the industry and 10 with Marsh & Moore. In Tallahassee, you will find Walter Gay who has been with the company for 12 years with a total of 30 years in the business. John Williams covers the north, central and southwest areas from a base in St. Augustine.

Each man lives within their territory and has an extensive knowledge of the industry and a commitment to continuing education in new products making them especially effective reps for Marsh & Moore and the manufacturers.

Ray Eshbaugh, Operations Manager, located at the St. Augustine office and warehouse, supervises these men. Others in this office include: Ellen Hayes, Inside Sales/Administration; Reba McLean, Bookkeeping; Sandy Hall, Accounting and Randy Crow, Inside Sales/Warehouse.

In the Kennesaw, Georgia office, Susan Haney is the Manager, handling inside sales, purchasing inventory for the warehouse and customer service. Her team includes: Sally Chalkley, Inside Sales/Accounting and Will Hall in Inside/Outside Sales.

Marsh & Moore does more counter days, training sessions and rep calls than any other Manufacturers' Representatives in the territory. The field salesmen schedule as many counter days as possible, where they demonstrate new products and techniques, often including principals from their major lines.

Whether it's septic systems, plumbing, irrigation, well supplies, industrial applications, swimming pools or underground utilities, Marsh & Moore can provide pipe and associated products to the wholesaler. As Mark Marsh says, "You have to prove yourself every day. Both wholesalers and manufacturers have to know that we're doing the job for them!"



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NAVIGATING THE NEW ZABEL® WEB SITE!

By Brian Borders, R.S.

Patience is a virtue- especially when you're searching the worldwide (wait and see if the web page will ever finishing loading) web. I am the first to admit I have no patience. My fellow ZABEL® employees and especially my wife can attest to this, and there is nothing that tests my minuscule level of patience more than the Internet.

There is so much information available and so many websites to browse; I don't "wait" to see if the page I am trying to load is worth the wait. I'm gone -- can't wait-- too many other choices. Got to keep moving... I think most Internet surfers feel the same way. I once read that the ideal download time for a web page is 1 second, however most people are willing to wait up to 10 seconds. Can you believe that? Our society has reached such a frenzied pace that our attention span has been reduced to between 1 and 10 seconds. Soon we may reach a point where we can't wait to even turn the computer on. "I need information now! I can't wait for the computer to start-up. Are you crazy?"

As a manufacturer, the question then becomes: if everyone has such a reduced attention span and there is such a diverse and expansive choice of sites to view, how do you provide your customers with the information they need? That's easy - keep it simple. Over the past few months we have been revising our website to reflect this "Keep it Simple" attitude.



Our new homepage contains only a navigational bar to point you in the direction of the information you need. You will also notice our address and toll free phone number are prominently displayed on the homepage so you may contact us easily and quickly by phone, if you so desire. Other features on the new ZABEL web Page include the following.

Zabel Online Store

The ZABEL Online Store is a completely new feature that allows customers to easily find and purchase all the onsite products they need with a few clicks of the mouse. This secure shopping area also contains specification information for each ZABEL Product and a shopping cart feature

that allows you to view your order and enter your payment information with ease.

Tech Talk

Answers to commonly asked onsite and ZABEL Product Questions can be found in this new area of the website. If you have additional questions or responses you would like to see added to this area, please feel free to let us know.

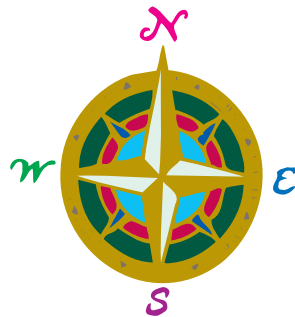
Zabel Zone Magazine

The Zabel Zone® Magazine is "The Onsite Wastewater Magazine" and now you can view the entire magazine online or view only those articles of interest to you. All articles are indexed and summarized under each issue date for quick and easy reference.

Onsite Education

This area of the website provides information on the ZABEL Sponsored Educational Sessions available nationwide and a tradeshow listing where ZABEL will be exhibiting or speaking. There will also be an area to sign up or request additional information. Other features include a literature request and download area for product literature and information. A site map so you can easily locate your desired topic in just a few clicks and a ZABEL contact area to reach that certain ZABEL employee or ZABEL Marketing Associate you need. There is also a brief description of who we are, where we've been and where we are going in ZABEL's Story.

Keep in mind these are just a few of the features both old and new that have been incorporated into our new website [zabelzone.com](http://www.zabelzone.com). The entire site has been updated with a new look and is much more user friendly for those of you, who like me, have the patience of a six year old on a road trip to Disneyland. Check us out at www.zabelzone.com and start your search the simpler faster ZABEL Way.



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Ms. Nurse enjoying the company of the locals. I'm sure the feeling was mutual with Ms. Nurse's heavy southern belle accent, this taxi driver enjoyed the company as well.



Harry took his mother, Helen, on a trip to England. They spent several days researching the Nurse family tree.



2001

October

10th-14th, NOWRA, Virginia Beach, VA., 301-776-7468, www.nowra.org

13th- 17th, WEFTEC 2001, Atlanta, GA., 703-684-2400

19th- 20th, Pennsylvania Septage Management Ass., 2001 Trade show, Lake Harmony, Pennsylvania, 717-763-PSMA, www.pasma.net

December

5th-6th, KOWA, Louisville, KY., Karen Purdon, 859-336-0896

2002

January

15th-17th, Onsite Sewage Treatment and Disposal Conference, Auburn University, Auburn, AL., Elaine Ridgeway, 334-844-5720, eridgway@eng.auburn.edu

18th-20th, FOWA Convention, Bill Carson, 863-956-5540

22nd-23rd, MSO, Columbia, MO., Mike Volrath, 515-251-8926

25th, FOWA Winterfest, Crystal River, FL., Bill Carson, 863-956-5540

29th-30th, IOWWA, W. DeMoines, IA., Mike Volrath, 515-251-8926

February

20th- 23rd, IICA, Birmingham, AL., Paul Sandefer 270-274-3403

27th- March 2nd, Pumper Show, Nashville, TN., Kim McGee 715-546-3346, www.pumpershow.com

At the time of printing those shows highlighted in red will have someone from Zabel speaking or exhibiting at the conference.

For the most up to date listing, or to submit a Conference or Trade Show see the Trade Shows page under the Coffee Shop section on our website.

An up to date listing of tradeshow and conferences can be found on our website www.zabelzone.com

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- ✓ Scheduling
- ✓ Planning
- ✓ Organizing
- ✓ Travel
- ✓ Registration

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The ADVENTURES Of Zabel Man





*Richard J. Otis, P.E.
Ayres Associates*

DECENTRALIZED WASTEWATER MANAGEMENT

LOOKS GOOD ON PAPER, BUT ...!

Now that I have your attention, let's talk about "Integrated Wastewater Management." What is it? It's about the same thing as 'decentralized wastewater management' except that I don't like that term. It's misleading. Facilities planning in unsewered areas should not be an approach of either sewers or onsite treatment. Rather, the range of technologies should be considered objectively and the most appropriate technology or technologies in combination selected to provide service to everyone in the planning area. Integrated wastewater management is the integration of onsite, cluster and conventional wastewater treatment technologies, as appropriate, within a single public or private utility structure. In other words, retain what is good about municipal wastewater facilities- central management. 'Decentralized wastewater management' focuses on the technology, but it is management that we need. Now you know why I don't like the term.

Whatever you choose to call it, the time for appropriate application of wastewater treatment technologies under central management has come. In places of the planning area where development density is too low for conventional sewerage, properties would be served by onsite or cluster treatment systems. These systems would be the responsibility of the wastewater utility to operate and maintain just as with conventional sewerage. To keep costs affordable, existing components or entire individual onsite systems would be incorporated into the utility. Access to the onsite or cluster systems would be provided through outright ownership or permanent easements to the systems.

Accepting the responsibility for performance of scattered onsite systems on private property is a frightening thought for a utility. How can the utility be sure the systems will work? How will they be monitored and controlled without excessive costs? How will system replacements be accomplished on private property? How can the repair and replacement costs be anticipated and incorporated into the depreciation budget?



These are important questions that need answers.

If the utility is to stay solvent, it better be careful about what existing individual onsite systems it accepts. Incorporating existing systems of unknown design, construction, age, and operating history without some assurance that they still have valuable useful life is foolish. Yet, how can useful life be estimated? It can't with any confidence. But there are some things the utility can do to provide some assurance that the useful life is extended short of rebuilding the system.

Subsurface infiltration systems usually fail because of hydraulic or organic overloads. (They fail for other reasons, but siting, design or construction problems show up in the first year or two.) Before accepting an existing system, the hydraulic and organic loadings need to be controlled. There are two things I would recommend be done on all systems to be incorporated into the utility: 1) installation of effluent filters on all septic tank outlets (with access ports), and 2) installation of a surge shortage tank with timed dosing. Both help to control the organic loading. The filters prevent unexpected discharges of organic solids and the timed dosing spreads the organic loading uniformly over time to allow better soil aeration (see "Balancing Your BOD" in Zabel Zone™, Spring/Summer, 1997). The surge storage and timed dosing prevents more wastewater being pumped to the infiltration system than the system is designed for. As a result, hydraulic overloads are prevented. If water use is excessive or clear water infiltration occurs, the surge storage tank will fill and a high water alarm activated. These are good controls to have on any system!

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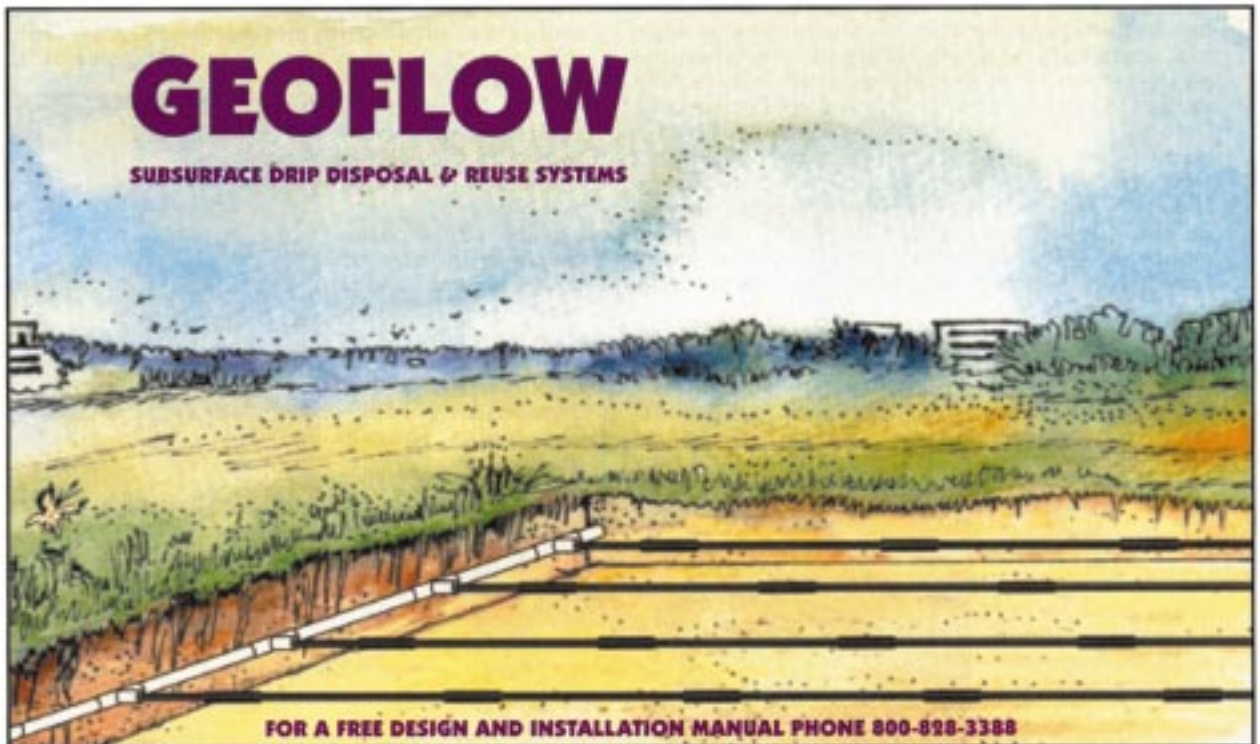
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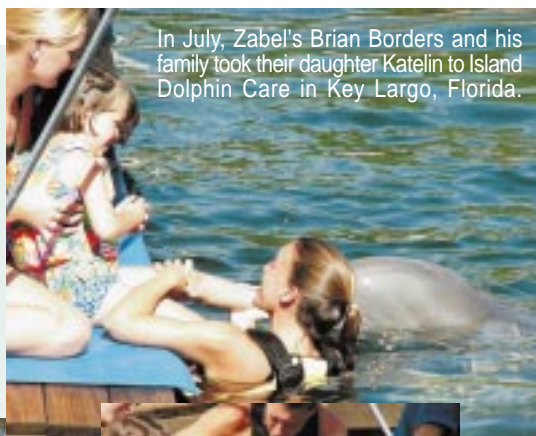
While vacationing in Florida, Jan and Harry took a day and went off-shore fishing with Captain Kevin aboard the Teaser.



As we have no photographic proof of Harry catching any of these beauties, I will have to say it's a good thing Jan was there. Actually Harry has become quite the outdoorsman. Congrats on the catch!

And thanks from all the Zabel employees on all the fresh fish you brought back.

Dolphin fish, or maybe better known by the table fare name of Mahi-Mahi



In July, Zabel's Brian Borders and his family took their daughter Katelin to Island Dolphin Care in Key Largo, Florida.



Island Dolphin Care is a non-profit organization that provides weeklong dolphin assisted therapy for special needs children. Katelin enjoyed her week of swimming with Isla (her dolphin) and learned many new things from all the staff and therapists at IDC.



For more information on IDC and their services go to www.islanddolphincare.org.

Zabel Comes to You!

The development of new on-site technologies has resulted in many organizations scrambling to educate and train their members and employees. Zabel's Environmental Specialists spend the majority of their time working with groups of professionals in their educational efforts. At Zabel, we pledge our support to the education of the on-site professional. Whether your organization is that of installers, manufacturers, regulators or design engineers, Zabel wants to assist you in your training efforts.

Simply complete the blanks/boxes below, and return the form. Your Environmental Specialists will contact you to arrange a time, place and date. Zabel can participate in your agenda of on-site training, or we can conduct a complete training session over the various technologies new to the industry. We look forward to sharing in the success of your organization.



Organization Name _____

Address _____

City _____ State _____ Zip Code _____

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Complete Training Class _____ One of Participants at Training Class _____

Expected Number of Attendees _____

Topic(s): Check all areas of interest

- ☐ Effluent Filters
 ☐ Effluent/Sewage Pumps and Sizing
 ☐ Discharge Systems
 ☐ Alarms & Controls
☐ Access Systems
 ☐ Grease Traps
 ☐ Peat Systems
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 ☐ Codes/Standards
☐ Aerobic Systems
☐ STEP Systems
☐ Other _____



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Rural Electric Cooperatives provide management solutions



If we are to achieve EPA's Clean Water Act (CWA) standards for water quality, we must change the way we do business. We start by defining onsite wastewater treatment and reuse as a utility. A city sewer system is defined as a utility, and everyone is comfortable with that. The only differences between sewer systems and onsite systems are the scale and treatment/reuse process. The product is the same - clean water.

One way to achieve CWA standards is by installing advanced community or onsite wastewater treatment systems. Advanced treatment should require a professional, Responsible Management Entity (RME) to manage, operate, and maintain these complex systems. Homeowners are currently the RME for conventional septic systems and many of the advanced systems in operation. Considering the failure rate of septic systems and the complexity of new advanced systems, homeowners continuing in the role of RME will not achieve CWA standards. However, a professional RME is more likely to achieve those standards.

Who can be an RME? As defined by law or regulations, virtually anyone can become an RME. But to safeguard the consumer, a few requirements should be considered. The RME should have:

- Technical capacity by having certified operators and engineering expertise of small community and onsite systems.
- Managerial capacity by staffing utility business management expertise.
- Financial capacity by having significant financial resources or assets.

- Regulated by a public authority or a body comprised of RME customers.

The most obvious way to develop an RME in Kentucky, and come close to meeting the above requirements, is by developing sanitation districts. These are legal entities established by state law and can take the responsibility of areas in a county not covered by a municipal sewer 201 plan. Bath County, KY recently developed a countywide sanitation district, which will own a small community system.

Clark Energy Cooperative was selected to manage the wastewater systems of the Bath County Sanitation District. Clark Energy is developing technical capacity by cross training staff. Clark Energy already has the managerial capacity to manage a utility, and they are working with local and state officials to attract grant money to ease the debt of the district. Rural electric cooperatives (REC) are viable RMEs, and this management concept isn't new. In EPA's *Response to Congress on Use of Decentralized Wastewater Treatment Systems*, EPA recognized the possibility of utilizing existing rural infrastructure as a viable management option by creating an entire section of the report entitled *The Role of Rural Electric Cooperatives in Upgrading Facilities*.

As we look at the economics of small community and onsite system management, we recognize several important issues. First, money is king. And there are two ways to handle the economics. One is the simple septic system - where the homeowner is the RME and manages the system. As noted previously, this has never worked well with conventional septic systems and

will be worse for advanced systems. Secondly, economies of scale must be used to lower the cost per home. This will help make monthly management fees affordable.

By utilizing existing utility infrastructure, Clark Energy can provide a quality service at a rate affordable to the customer.

Properly managed and sustainable wastewater treatment systems with the appropriate economies of scale will improve the quality of life in rural Kentucky, its land use, and its land value. Not only is this the right thing to do, it is our environmental responsibility to implement infrastructure that will keep Kentucky clean for generations to come.

Editor's Note: To keep up with this and other interesting environmental issues you can visit the EPA's website at www.epa.gov

Scott Drake, PE
Senior Engineer
East Kentucky Power Cooperative, Inc.



By Scott Drake, PE

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TechTalk

Zabel® offers several sizes of filters, wouldn't one size be sufficient?

The old adage, "one size fits all", doesn't work when installing filtration systems. We manufacture a variety of models and sizes of filters because each installation is different. All of our filters are sized by flow rates, which range from 800 GPD to 4500 GPD, and provide either 1/16" or 1/32" of filtration. The filter should be selected based on the flow rate and the amount of solids being introduced to the system. It is important the total system and all of its components be sized and installed to suit the site.

Why is a grease trap important on a restaurant?

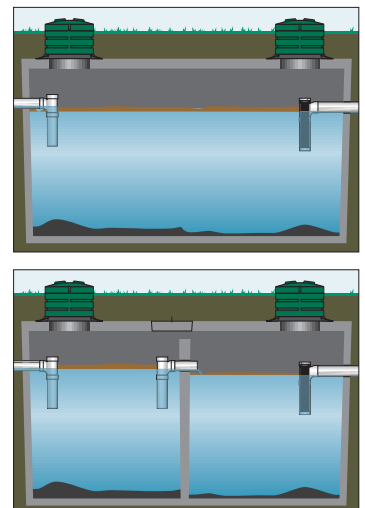
A restaurant or similar commercial establishment produces grease at a level which can cause an onsite system to fail due to clogging the soil interface. Also, excessive grease will interfere with a sewage treatment plant and clog sewer lines if the facility is on public sewer. A properly sized grease trap, a Zabel A300 effluent filter and regularly scheduled maintenance can help avoid these problems.

What is a STEP system?

The acronym STEP stands for Septic Tank Effluent Pump. It is often confused with "system" that performs the total function of sewage treatment and disposal. The STEP system's sole purpose is to deliver the effluent, after it has received primary treatment in a septic tank, to an onsite disposal system or a decentralized wastewater treatment system located offsite. Zabel has several packaged STEP systems and can provide custom packages based on your need.

Which is better, a single compartment or two compartment septic tank?

Both of these tanks have their advantages and disadvantages. A single compartment tank provides a larger holding area for physical settling and biological breakdown of solids, and therefore, provides a longer interval between pumping. However, there is a better chance of suspended solids being carried out to the disposal field. A properly designed effluent filter, such as the Zabel A1800 or A100 can prevent most of the solids carryover. A two-compartment tank produces effluent with a lower amount of suspended solids, but requires pumping more often because the first compartment is much smaller than the single compartment tank. Even this lower suspended solids load is not total protection of the disposal system and should still have an effluent filter installed in the outlet of the tank.



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