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# WasteAdvantage magazine

The Advantage in the Waste and Recycling Industry



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**NICHOLAS COUNTY LANDFILL:**  
Weathering the Political Storm

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**GREEN**  
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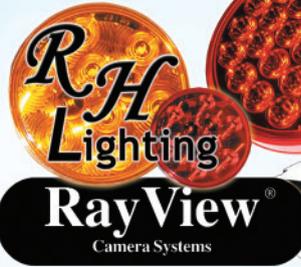
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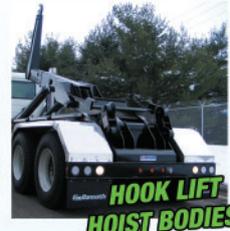
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## Editor's Note



### IT'S HARD TO BELIEVE THAT FALL IS AROUND THE CORNER AND THE SCHOOL

year is about to be again. That means more holidays, more school projects, more family gatherings and, ultimately, more waste to sort through and get rid of. Luckily, more innovative ways are being used to organize and dispose of the trash. At WASTECON in beautiful Long Beach, CA in September, we'll see some of the new techniques and processes that companies and public entities have come up with to make procedures more efficient. We look forward to the show!

This issue has some great articles. Our spotlight is on the Nicholas County Landfill in West Virginia. Despite some real tests, including facing opposition and legal challenges, it is an operation that has endured and even looked at different, non-traditional ways to produce revenue. Check it out on page 14. Other articles include "Improving Your Bottom Line with Tax Filing Efficiencies" (page 20), which explains the benefits of using a tax automation system, and "Keep Waste Where It Belongs: Storage Solutions for Solid Waste Companies" (page 26), discussing alternative options for long-term waste storage other than a landfill. In addition, the guest commentary, "Green is the New Black" (page 22) gives you something to think about with regards to what kind of chemicals you are using in your facility or shop. And in the RTL section (page 41), check out "19 Considerations When Buying a Shredder" that lays out the questions and elements to think about when you are in the market for this type of machinery.

Be sure to visit [www.wasteadvantagemag.com](http://www.wasteadvantagemag.com) for all the latest news and issues, archives, online articles and our Marketplace, where you can find any type of industry equipment you may be looking for. Also, don't forget to join us in our challenge to be green by reducing toxic chemicals in the waste and recycling industry. Our newly minted, Green E Awards, challenges those in this industry to start looking at what type of chemicals they are using and how environmentally and people-friendly they are. Log on to fill out an application online for your facility or turn to the Marketplace (page 63) in this issue to find an entry form. We look forward to seeing all of you next month. Feel free to contact me with any questions or comments. Your input is always appreciated.

Best Regards,

Angelina Ruiz  
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The Advantage in the Waste and Recycling Industry

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### Improving Your Bottom Line with Tax Filing Efficiencies

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SCOTT CLEVENGER

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By adjusting, planning and executing our business operations to include safe and effective use of cleaning chemicals, you can begin a movement towards reducing toxic fluids in your facility.

B. SCOTT TAYLOR

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PATRICK VAN EVERY

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STEVE CHRISTIAN



## On the Cover:

From Waste to Value®: 440D Shark Shredder increasing compaction of a C&D landfill.

Photo courtesy of TANA-North America (Lubbock, TX).

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## Trash Talk



### PTR Baler & Compactor Company Welcomes New International Sales Manager

**PTR BALER & COMPACTOR COMPANY** (Philadelphia, PA) welcomes Patrick Murphy as the company's International Sales Manager, who will be responsible for sales and marketing growth, contribute in product exploration and improvements for alternative mainstream markets, vendor selection, as well as growing/improving international partnership relationships. Murphy comes to PTR with more than 30 years of experience marketing, engineering

and supporting technology solutions for the manufacturing sector throughout North America and has been recognized for his outstanding sales achievements. Says Murphy, "I am thrilled to be part of the PTR team. My entire career has been spent in the recycling and waste disposal equipment field and I look forward to continuing that tradition by providing 'best of breed' equipment and services to PTR's current and future customers."

*For more information, call (215) 533-5100 or visit [www.ptrco.com](http://www.ptrco.com).*



### RSC Bio Solutions Appoints Segment Managers to Focus on Growth

**RSC BIO SOLUTIONS** (Charlotte, NC) has organized its sales team into segments focused on growing private and public waste, marine construction, marine transport, utility fleets, offshore oil, and gas and wind power industries. Said Mike Guggenheimer, president and CEO for RSC Bio Solutions. "We have added experienced and knowledgeable segment managers to position our brand and products for growth in each industry they serve."

Patrick Van Every joins as market manager, solid waste. Matt Houston, market manager, marine construction, brings eight years of business development experience in the light, medium and heavy construction industries. Ken Shelley is market manager of marine transport. Debbie Guynn Mills will be serving as market manager, utility fleets. As executive vice president of sales, Mark Miller is responsible for creating and implementing market strategies, maintaining and growing strategic relationships specific to marine-based markets. Miller will also manage the offshore oil and gas segment business for RSC Bio Solutions. Finally, in addition to her role as vice president of marketing and business development, Lisa Owen will manage the wind power segment for RSC Bio Solutions.

*For more information, call (877) 464-4865 or visit [www.rscbio.com](http://www.rscbio.com).*

### Scott Dols Elected to Environmental Research and Education Foundation Board of Directors

The Board of Directors of **EREF** (Raleigh, NC) announces the election of its newest member, Scott Dols, President and Chief Executive Officer of Big Truck Rental. Dols has more than 25 years of business experience specializing in developing companies in high-growth market segments, ranging from landscaping to private home security. Dols has been an active member of various trade organizations within the waste industry. Most notably he sits on the WASTEC Board of Governors, EIA Board of Trustees and the DCA Board (Detachable Container Association).

"I'm thrilled to play a leadership role in EREF," said Dols. "This is an organization dedicated to the science of our industry through the funding of scholarships and grants. I find it extremely exciting that EREF's research is expanding beyond just landfills—in fact roughly 40 percent of currently funded projects focus on sustainable end-of-life technologies."

*A complete list of the 2013 EREF Board of Directors can be viewed at [www.erefdn.org](http://www.erefdn.org).*



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## AUGUST 2013

### 21 – 23: 8th Annual Georgia Environmental Conference

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Jekyll Island, GA  
www.georgiaenet.com

### 25 – 28: APWA International Public Works Congress & Exposition

McCormick Place  
Chicago, IL  
www.apwa.net

### 26: Recycling Innovators Forum

Louisville Convention Center  
Louisville, KY  
www.recyclinginnovators.com

### 27 – 28: Resource Recycling Conference

Marriott Louisville Downtown  
Louisville, KY  
www.resource-recycling.com/rr\_conference/index.html

### 27 – 30: 2013 SWANA Quad State Conference Kingston Plantation

Myrtle Beach, SC  
www.quadstate2013.org

## SEPTEMBER 2013

### 10 – 11: 15th Annual Pennsylvania Fall Conference

Harrisburg Hilton Hotel  
Harrisburg, PA  
www.keystoneswana.org

### 10 – 11: 2013 NSWMA Southeast Annual Conference

The Westin Savannah Harbor Golf Resort  
Savannah, GA  
www.environmentalisteveryday.org

### 10 – 12: National Advanced Biofuels Conference & Expo

CenturyLink Center Omaha  
Omaha, NE  
www.advancedbiofuelsconference.com

### 11 – 12: E-Scrap 2013 Conference

Omni Orlando Resort at Championsgate  
Orlando, FL  
www.e-scrapconference.com

### 15 – 17: Waste Conversion Technology Conference & Trade Show

Regency Mission Bay Spa & Marina  
San Diego, CA  
www.waste-to-fuels.org

## 17 – 19: WASTECON 2013

Long Beach Convention Center  
Long Beach, CA  
www.wastecon.org

## 23 – 25: 23rd Annual ARC Conference & Trade Show

Best Western Inn of the Ozarks  
Eureka Springs, AR  
www.recyclark.org

## 24 – 25: 2013 NSWMA South Central Annual Conference

Hyatt Regency Hill Country Resort  
San Antonio, TX  
www.environmentalisteveryday.org

## 26: The 2013 Environmental Research & Education Foundation (EREF) Fall Classic Golf Tournament

PGA National Resort & Spa  
Palm Beach Gardens, FL  
www.erefdn.org

## OCTOBER 2013

## 1 – 2: 2013 NSWMA Heartland Annual Conference

Quartz Mountain Resort  
Lone Wolf, OK  
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## New Hours-of-Service Safety Regulations Begin in Order to Reduce Truck Driver Fatigue

The U.S. Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA) announces that new federal regulations designed to improve safety for the motoring public by reducing truck driver fatigue took full effect on July 1, 2013. "Safety is our highest priority," said U.S. Transportation Secretary Ray LaHood. "These rules make common sense, data-driven changes to reduce truck driver fatigue and improve safety for every traveler on our highways and roads."

Trucking companies were provided 18 months to adopt the new hours-of-service rules for truck drivers. First announced in December 2011 by FMCSA, the rules limit the average work week for truck drivers to 70 hours to ensure that all truck operators have adequate rest. Only the most extreme schedules will be impacted, and more than 85 percent of the truck driving workforce will see no changes. Working long daily and weekly hours on a continuing basis is associated with chronic fatigue, a high risk of crashes and a number of serious chronic health conditions in drivers. It is estimated that these new safety regulations will save 19 lives and prevent approximately 1,400 crashes and 560 injuries each year. FMCSA's new hours-of-service final rule:

- Limits the maximum average work week for truck drivers to 70 hours, a decrease from the current maximum of 82 hours;
- Allows truck drivers who reach the maximum 70 hours of driving within a week to resume if they rest for 34 consecutive hours, including at least two nights when their body clock demands sleep the most - from 1-5 a.m., and;

- Requires truck drivers to take a 30-minute break during the first eight hours of a shift.

The final rule retains the current 11-hour daily driving limit and 14-hour workday. Companies and drivers that commit egregious violations of the rule could face the maximum penalties for each offense. Trucking companies and passenger carriers that allow drivers to exceed driving limits by more than three hours could be fined \$11,000 per offense, and the drivers themselves could face civil penalties of up to \$2,750 for each offense.

For more information, visit [www.fmcsa.dot.gov/HOS](http://www.fmcsa.dot.gov/HOS).

## Environmental Industry Associations Launches Community Service Recognition Program

EIA launched its new national community service recognition program, EIA Community Changemakers. Through the Community Changemakers program, EIA will recognize and honor those companies and individuals involved in America's waste and recycling industry who are making notable impacts in the industry and their communities, serving as leaders and role models and driving innovation in waste management, recycling and environmental protection. EIA will recognize each recipient of the Community Changemakers honor on its Web site, [www.beginwiththebin.org](http://www.beginwiththebin.org), and on its Facebook and Twitter social networking accounts. EIA will also send an award certificate to each Community Changemaker and share news of the honor in the recipients' home media markets.

For more information, visit [www.environmentalistseveryday.org](http://www.environmentalistseveryday.org). To recommend an individual, group or company to be honored as a Community Changemaker, contact Craig Branson at [cbranson@envasns.org](mailto:cbranson@envasns.org).

## SWANA Supports Federal Court Validation of Horry County Flow Control

On June 11, 2013, SWANA's Executive Committee voted unanimously to support Horry County, SC, whose flow control ordinance was upheld by a federal district judge. "Flow control can work effectively to implement integrated municipal waste management programs," said Anne Germain, SWANA International President. "That's why, SWANA supports cities, counties and waste authorities that have crafted and implemented waste facility designation programs that balance specific and unique local objectives with the legitimate interests of residents, businesses and other affected parties."

The case is now pending in the U.S. Court of Appeals for the Fourth Circuit. A decision date has not yet been set. SWANA's support is officially recognized by the Amicus brief being submitted on behalf of a number of localities and public waste agencies.

For more information, visit [www.swana.org](http://www.swana.org).

## EPA Sought Input on New Clean Air Standards for Solid Waste Landfills

In June, EPA invited small businesses, governments and not-for-profit organizations to participate as Small Entity Representatives for a Small Business Advocacy Review Panel. This panel focused on the agency's review of its New Source Performance Standards for municipal solid waste landfills. The Clean Air Act requires EPA to review new source performance standards every eight years and revise them if necessary. EPA is under a court-ordered deadline to complete its review and propose how to address the results of that review by Feb. 4, 2014 and to take final action by Dec. 17, 2014.

For more information, visit [www.epa.gov/rfa/landfill.html](http://www.epa.gov/rfa/landfill.html).

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## Nicholas County Landfill: Weathering the Political Storm

**By thinking outside of the box, keeping their employees informed and creating new solutions for their challenges, the NICHOLAS COUNTY LANDFILL HAS TRANSITIONED TO AN INNOVATIVE OPERATION.**

**LOCATED IN CENTRAL WEST VIRGINIA, NEAR THE** Gualey River, the Nicholas County Landfill has made many transitions from being a “dump” 10 years ago to the innovative operation that it is today. Although anyone who lives in West Virginia may dispose of waste at the Nicholas County Landfill, waste is received on a regular basis from not only Nicholas County, but also Webster, Clay, Braxton and Fayette Counties. It is run by the Nicholas County Solid Waste Authority (NCSWA), which is made up of five board members who meet once per month. Currently, NCSWA employs 14 staff members, including the Executive Director, Larry Bradford (who runs the landfill operations and reports its status to the board at the end of the month), a full time Engineer and Nicholas County’s only Litter Control Officer.

When Executive Director, Larry Bradford, took the position nine years ago, there were no paved roads leading into the facility. “Customers who brought waste to the facility were actually pulled by dozers in and out of the waste disposal cell and back out.” Now, the roads are paved and outbound/inbound sensory scales were installed so public access is a much more smooth process. The operation has grown from three employees and three pieces of equipment to 14 employees and 26 pieces of equipment, including dozers, excavators, rock trucks, construction equipment and compactors. All of the landfill’s construction has also been done in-house.

The only part of construction still bid out is the liner installation. “In the State of West Virginia, if you bid out from a State entity, you have a prevailing wage that has to be paid out to the employees and it drives the construction costs way up. It was less expensive for us to hire the employees, get the equipment and do it ourselves; plus, it creates short-term jobs for area residents,” says Bradford. Even though a landfill operation is an ongoing process, Bradford is very pleased with where it stands now. For instance, part of the property has a full-scale softball field that is already being used and they are in the process of building a soccer field. “As the closed parts of our landfill move to the rear of the property, we are changing them into a usable resource; so on the day that we finally close all the landfill, it will be a park and sports complex for the community.”

### Thinking Outside of the Box

From fuel prices, equipment costs, legal fees, disposal fees for CED’s (covered electronic devices) and just inflation in general, the economy in the past year has greatly affected the Nicholas County Landfill. Due to the coal mines shutting down in accordance with the EPA rulings, a large part of the waste stream, including metals and heavy wood products in the landfill has gone down significantly—decreasing by 300 to 400 tons per month. “The two main industries in Nicholas County

One of Nicholas County Landfill’s compactors working the cell.



are coal mining and logging. Both of these industries have been hard hit with regulations. This in turn affects our waste stream. As jobs shut down, we not only lose the waste generated by these companies, but many residents have also relocated to find employment, which further reduces our waste stream," says Bradford. As a result, the NCSWA has attempted to stay ahead of the curve by seeking new ways to bring in new revenues, such as the newly opened C&D (construction and demolition) cell, which is a lot cheaper to construct since it just has to have a clay liner and leachate system versus a double HDPE liner system that is very costly "Contractors who tear down old buildings can bring their waste to us for \$37.50 per ton vs. municipal waste, which is about \$69.25 per ton, so it's a large savings and it makes the price feasible for the community to tear down these eyesores and dispose of them correctly," says Bradford. "Plus, we were hit by Super Storm Sandy last year and lost 27 businesses and residential damage in this County. The 48 inches of snow just collapsed stores and businesses all over the County, so we've also lowered the price in order to relieve some of their pain of getting rid of that stuff."

Bradford points out that the NCSWA also goes out and educates the public on recycling and the options that the NCSWA offers. "We actually give presentations in the classrooms and have developed a recycling competition, giving out monetary awards for first, second and third place which they can use to buy supplies, playground equipment, etc. Also Raleigh County Solid Waste Authority has a robot named Kirby which they allow us to use for classroom education and he does a speech about recycling—that's a real attention getter." In addition, the NCSWA speaks at boy and girl scout meetings, senior citizens meetings, church meetings and any group that calls and asks for someone to



The scale house with the front part of the current disposal cell (five) in the background. To the side is one of the roll-off trucks used to transport recycling, and in the background, there is a red roll-off truck used to transport waste on site and recycling to RCSWA.

go through the recycling process, the advantages of sorting and separation, and how it comes down to saving them money. Plus the landfill gives tours to the public. "We have a bus that we put them on, give them a tour and dinner afterwards—we are always willing to show off what we've done," says Bradford. On the landfill's Free Day, people or customers in the community can bring in 520 pounds of waste without paying a fee, which encourages people to get rid of their waste correctly. The lines on Free Day have an upward wait of two hours. The landfill also works very closely with the West Virginia Department of Environmental Protection (DEP) on the Reap Program, which does open dump cleanups, illegal dumps and tire piles. The landfill sends out crews to help clean up by supplying the labor and machinery, while the DEP pays the tipping fee. The Nicholas County Solid Waste Authority works closely with the Nicholas Day Reporting Center who supplies the Authority with clients who have been sentenced to Community service to help in cleanup of open dumps and roadside litter. The Authority then picks up the litter and the WV DEP REAP Program pays the tipping fee.

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## Nicholas County Landfill: Weathering the Political Storm



Top: The current cell the landfill is working, which is cell five. The landfill's current footprint is 18.5 acres; this is closed and active areas. On cell five, the landfill tries to keep a dry weather area and a wet weather area.

Right: The view from behind the ball field. The road to the right of the picture is the entrance road coming into the landfill.



### Keeping Everyone Informed

Bradford is one of the founding members as well as the current president of the West Virginia Landfill Managers Association. He and his Vice President James Allen, Executive Director of the Raleigh County Solid Waste Authority conduct all of the MOLO (Managers of Landfill Operations) training for the State as well as reach out to other landfills to seek ways to help them with issues they face. "Instead of traveling all over the country, we bring training into our State through SWANA and train landfill managers and DEP inspectors either here or at their location. We also do private trainings for Waste Management—they have such a large employment that they may call and say 'hey, we need to do a training at a specific location' and we'll go there and train their employees. SWANA is great to work with—they just bend over backwards to help us out," he says. Training sessions are usually held once every three months at which time Bradford will call everyone at each landfill or place of business and tell them that they will have a training session within the next 60 days. As far as in-house, employees are offered training on safety, hazmat, CDL, CPR training and personal training for construction on the site.

In addition, every Monday morning, Beth Armstrong, the landfill's Office Administrator, leads a different safety topic. Then, on Thursday, a pop quiz on the topic is given to find out if it soaked in. Training is also given on how to recognize hazardous waste, red bags vs. yellow bags, etc. When hazardous waste happens to come into the facility, Bradford says they isolate it and call the DEP, who sends a team to check it out and tells the landfill how and where to properly dispose of it. "We actually have camera systems installed that look down into the load to see everything coming in. We'll do sporadic waste screens where we'll unload and go through with an excavator to check and see if there is anything hazardous. We'll do this a couple of times per week so no one knows its coming. We've been very fortunate that we haven't had anything too significant."

### Curbside Recycling Program

Bradford points out that the NCSWA's greatest achievement by far has been its Curbside Recycling Program and Senior Program. In 2010, NCSWA began the State of West Virginia's only Curbside Recycling Program, which operates without the aid of any grant money or even support from the State Solid Waste Management Board (WVSWMB), the supporting agency for Solid Waste Authorities in West Virginia. The Curbside Recycling Program picks up recycling at curbside throughout the entire county. This voluntary program is supported and maintained solely by the sale of recycling bags to those who

wish to participate. The NCSWA also sells the recyclable materials, including steel and precious metals. It is processed through Raleigh County Recycling Center who markets the material and gives the NCSWA back a dividend. With the Authorities color coded bag system 99 percent of the materials collected are a clean product ready for marketing. NCSWA has found that the advantages of the bag program outweigh an unmanned drop off location. Drop off locations for recycling which is unmanned lead to illegal dumping of waste in bins intended for recycling. The entire load of recycling will then be contaminated and must be disposed of as waste. Using a fleet of eight trucks to pick up the recycling material, the NCSWA hits everyone in Nicholas County including the people in the outlying areas.

"When the NCSWA developed this program, we put it out there on a trial basis, starting small with our biggest city in the county, which is Summersville. The next thing we knew, the phone was ringing off the hook with people in the outlying areas, wanting to get involved as well as the school system and all the county entities, government agencies, etc.," says Bradford. "It was at this point that we realized that our senior citizens were paying the same monthly bill as a regular household, which on average is about \$18 to \$19 per month, when most of our senior citizens only produce four bags per month. So we came up with the Senior Program. If you are 62 and over, you can get the wet waste pickup by the bag right at curbside—it makes their cost go down to \$4 to \$5 per month." In a County of 26,000 people that are not mandated to recycle, the NCSWA has created recycling programs that have encouraged people to not only participate, but also buy the recycling and wet waste bags. "We use that as an incentive to show them how recycling cuts down on their waste and makes their garbage bill cheaper. As a result, it took off like wildfire."

In fact, SWANA recognized the program in 2012 at their annual conference. "Although we came in fourth that year in the category of Recycling Systems, our program was so unique that they recognized us nationally with the other three winners. SWANA encouraged us to continue to promote its programs by recognizing its accomplishments and for its design and implementation," says Bradford. "John Skinner, Jesse Maxwell and Estella Martinez of SWANA have been a huge encouragement and their help has been invaluable in promoting the NCSWA recycling program. It was only after SWANA recognized the NCSWA recycling program that the Governor of West Virginia, Earl Ray Tomblin was even made aware of the NCSWA Curbside Recycling Program. He then also recognized NCSWA for its programs and achievements in recycling that same year."

## Political Challenges

Bradford explains that some of the challenges the Nicholas County Landfill has faced the last few years has been regulations passed by agencies charged with oversight of Solid Waste Authorities and landfills without an evaluation on how these regulations will affect not only the public, but also landfill operations. "In 2011, Senate Bill 398 pass on CEDs, which banned electronics from landfills. Although we received a letter telling us you cannot put them in the landfill anymore, it also stated we still had to take them. So we end up disposing of them ourselves at a different facility and paying about 35 cents per pound to get rid of these TVs and computer monitors. Last year, the overall cost was about \$36,000. We are still trying to find a better solution. We can't keep eating the cost because it takes money away from our recycling programs and everything else," says Bradford. The cost is anticipated to double in the coming year. Bradford believes that before the State Legislature passed this ruling, they should have gotten public comment, and met with landfill managers and directors to come up with a solution, including disposal and fees. The landfill used to charge to dispose of TVs, however they had backlash from a private hauler who filed a complaint with public service who, in turn, sent the landfill an order to stop charging the TV disposal fee. "Some of the other six public landfills in the state are charging upwards of 25 dollars per TV, but no one filed a complaint against them so they are allowed to do that. We are the only ones that have been ordered not to charge. I am in the appeal process right now and they, the WV PSC are going to give us a rate. However, even if they give us a rate by the end of the year, we can't recoup the previous costs and it will take money from other programs." NCSWA still maintains that CEDs are a recycled item and the WV PSC cannot regulate recycled items.

Not only is the landfill going through legal challenges, but the NCSWA also continues to face opposition from the West Virginia Solid Waste Management Board, staff and its Executive Director regarding the Curbside Recycling Program. The staff of the WVSWMB continues to try to persuade NCSWA Board members to abolish the recycling and senior programs. Bradford explains that traditional recycling which relied on grant funding was tried in Nicholas County in years past, however, because there is no money to operate it from year to year, it discourages the public and they quit participating. So the NCSWA developed the Curbside Recycling Program to be self-sufficient, not relying on any grant money, and now in its third year, it continues to grow every day. "We sign up about five to 12 people per week and we are still trying to reach the people in the outlying areas. We try the media and everything we can to get the message out there and sometimes you just have to go door to door." Unfortunately, the WVSWMB staff and its Executive Director support a local hauler who filed suit against the authority to have the wet waste portion of the recycling program stopped. The case was heard in January of 2013 in the Nicholas County Circuit Court. The Honorable Judge Gary Johnson found in favor of the Authority, ruling that the Authority can pick up wet waste. The local hauler has appealed this decision to the West Virginia Supreme Court and the NCSWA is currently awaiting their ruling, which is anticipated to remain the same as Judge Johnson's ruling. "You wouldn't believe how political landfills are," says Bradford. "I didn't know I was getting into politics more than disposal—but we've done well. We have a good board here and we're one of the smallest in the state and we do 26,000 ton per year. I'm very pleased with what we are doing."

## Looking Forward

Future goals for the Nicholas County Landfill include developing public relations and to continue to promote recycling and recycling education. "We will



The Gordon Brothers sign up for the curbside recycling program.

continue to think outside the box to find ways to do this. The best tool that we've had so far are the students of the county. We work with them from Kindergarten through high school and this really gets the message out there," says Bradford. "We are going to continue to try to keep their interest in it. Just extra money going into the school systems really pays off. We've done 16 schools in the county and we actually have a business that sponsors the bag for each school every year. Our citizens have also really stepped up to the plate on this." Bradford also says the NCSWA will continue to run the best landfill in the State. Although the Nicholas County Landfill is the smallest landfill in West Virginia, there is a wide variety of services offered to the public to meet their disposal needs. "We are excited to continue to develop ways to make our landfill environmentally friendly and watch recycling and recycling education grow in Nicholas County. If you take care of your community, your community will take care of you." | WA

For more information, contact NCSWA's Executive Director, Larry Bradford, at (304) 742-3518 or e-mail [larry.bradford@nicholaslandfill.com](mailto:larry.bradford@nicholaslandfill.com).

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## Improving Your Bottom Line with Tax Filing Efficiencies

Scott Clevenger

**As tax laws continue to evolve, and compliance activities become more complex, IT ONLY MAKES SENSE TO SIMPLIFY THIS PROCESS THROUGH AN EFFICIENT TAX AUTOMATION SYSTEM.**

**FILING TAXES IS OFTEN A CUMBERSOME ACTIVITY** riddled with effort and risk. Tax resources frequently find themselves spending countless hours during the first two weeks of every month pulling together the information required by tax jurisdictions. Even after this investment of time, waste management companies frequently file incorrect tax returns and are at risk for considerable fines and penalties. Key stakeholders are often left asking, “Isn’t there a better way?” Unfortunately, many companies find that they don’t have the time to explore options while keeping up with their current compliance activities. What steps can waste management firms take to improve their overall compliance activities while leveraging technology, increasing efficiency and reducing risk?

### Enabling World-Class Compliance

The tax compliance process is best viewed as three distinct activities: data collection, data evaluation and filing activities. A well-orchestrated process is clearly defined and organizational risks are minimized. When poorly executed, the resource costs and audit risks increase dramatically. Implementing process and business controls within each activity will improve organizational efficiency and mitigate risk.

### Data Collection

An important, yet incredibly challenging, aspect of creating an efficient tax compliance process involves the quality and availability of data. The challenge is typically due to limitations in the back-office application where transactional records are stored. Visibility into this data is often limited, and in some cases, access to the data is restricted.

The first step in achieving compliance excellence is to define a data collection strategy. Key stakeholders should participate in the evaluation process to determine the best plan and to provide the tax department with necessary information for compliance activities. Once this plan is in place, it is critical to execute and refine. This is not a one-time activity. As new products, customers or geographies are added to the business, the act of ensuring data readiness for reporting will continue.

In order to track the progress of improving data collection activities effectively, it is important to define owners and establish tracking metrics. The

defined metrics should ensure that continual process improvement is the goal. To achieve this, waste management firms should identify short, medium and long-term process improvement goals. Organizations should not assume that any remediation program for data collection will provide immediate results. Make sure stakeholders understand that this is a journey, and they will need to participate throughout the entire lifecycle. Progress against the established goals should be tracked and communicated to all process stakeholders.

### Data Evaluation

Once the plan for extracting data is established and being executed, evaluating the data for accuracy and relevance becomes the priority. Data can cover many broad areas driving what is reported and where it falls on the return. Defining the steps necessary for data analysis can simplify the process, ensuring that the right information goes in the right location. Manually sorting through the extracted data is a time-consuming and confusing process. Because this process is so difficult, it often depends on expert users to carry out the activities necessary for getting it right. However, there are steps waste management firms can take to improve this phase—at least in part—without adopting a fully automated solution. Tax filing experts should make sure that they have visibility into the transactional data. In order to better understand what happened and why, reports should be developed to provide this information. Proper visibility into transactions and reports tying out the data can simplify the evaluation process dramatically.

Defining the reporting requirements should be part of the strategic assessment. Tax departments should take a holistic view and ensure their requirements are met. Create a business case and work with IT to ensure the data necessary is provided. Tax departments should ensure that the reports are designed to support current and future business growth scenarios.

When thinking about analyzing data, it is also important to create specific transaction buckets for business-as-usual transactions. This will allow users to validate commonly used data and analyze unusual transactions such as new products, new customers,



new geographies or rare transactions. Reporting tools can help with this, but knowledgeable resources are critical as well. To enable this, knowledge sharing should be a regular exercise within the tax group. Sharing common processes, tax law changes and best practices for data analysis will create a more efficient tax analysis within the organization.

## Filing Activities

Once the data has been extracted and analyzed and the tools to aid evaluation are in place, it is time to start paper and electronic filing. While this can be accomplished manually, many organizations find that an automated process is more accurate and efficient. The timing of these activities will often create confusion, so a tax calendar or other planning tool should be used. For waste management firms that require filing in multiple jurisdictions, create a plan that avoids last minute scrambling to complete filing activities. Additionally, identifying a workflow process to support tax return creation, approval and submittal with payment prevents breakdowns. Tax resources may go on vacation and their backups must be identified. Timelines for approval should be established per jurisdiction. The check requisition process should be defined and enabled to ensure proper processing of payment can take place prior to tax return submission.

## Garbage In, Garbage Out

Given the complexity of calculating fuel-related taxes, getting taxes right is difficult. Most organizations' tax systems incorporate multiple, coded programs and tax tables in an attempt to arrive at transactional tax results. The act of monitoring and updating rules and rates is often a manual process, relying on organizational participants from tax and IT to reflect updates correctly within the back office application. Given the volatile nature of tax law changes, this has become one of the more challenging tasks for waste management firms to plan. Moving to an automated tax determination solution can solve many issues. Automated tax solutions help ensure that tax laws are updated correctly and on time every month. Organizations that move away from manual tax determination to an automated solution drive accuracy. Significant time-savings in analyzing transactional data will also result as the inputted data is trusted and consistent from the start.

## Moving to Automation

Many of the suggestions listed previously are addressed through moving to an automated compliance reporting solution. Business controls, integrated workflow, tax calendar planning and efficient analysis tools enable waste management firms to streamline their tax filing process. Additionally, the impact for cross-departmental input is minimized as the tax department now has all of the information needed to file taxes on time.

As your organization continues down the path to tax compliance excellence, evaluating an automated solution should be considered the final step. The organizational benefits relating

to increased efficiency and decreased risk of costly errors easily justify the investment. As tax laws continue to evolve, and compliance activities become more complex, it only makes sense to simplify this process through an efficient tax automation system. | **WA**

*Scott Clevenger is the Senior Director of Product Strategy with FuelQuest (Houston, TX) and has more than 19 years of experience in the tax technology area. Scott maintains an active role in the industry as a guest speaker and lobbyist. He has implemented automated tax solutions in over 30 countries for some of the world's largest oil and gas companies. He can be reached at (713) 222-5761 or visit [www.fuelquest.com](http://www.fuelquest.com).*

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## Green is the New Black

B. Scott Taylor

**By adjusting, planning and executing our business operations to include safe and effective use of cleaning chemicals, YOU CAN BEGIN A MOVEMENT TOWARDS REDUCING TOXIC FLUIDS IN YOUR FACILITY.**

**FIRST OF ALL, I'M NO CHEMIST. I AM, HOWEVER,** considered kind of a smart business guy. At least that's what some people say to my face. Who knows? What I do know, is that green is the new black and it's here to stay for a while too. I don't think that environmental issues are fads and I don't think the government is going to relax standards related to the use and handling of toxic chemicals. So, how do we adjust, plan and execute our business operations to include safe and effective use of cleaning chemicals? Reading this I can't wait. Hang with me. I will try to make this as exciting as possible.

Tell me if this sounds familiar. A salesman says, "Hey, I have this new green cleaner and it's amazing! You can replace those nasty chemicals you are using with this new safe stuff and all your troubles will be gone. It's cheaper and better, and does the same thing as the nasty stuff." I have a good friend that sells cars and he tells me all the time, "They all lie to me; as soon as their lips start moving, they start lying." I always think about how tainted he is after all these years in the car business. The truth is that we are all somewhat tainted. Some of us have been in business for a few years and some of us many. People can't seem to help themselves. This recent green movement is no exception. I think some of these companies mean well, but sometimes they get a little "sideways around turn three". So, here is the challenge. How do you make your company safe for employees, the environment and your equipment while still affording to run your business?

First of all, it isn't easy—it takes time, energy and resources. Most of which we can't seem to find enough of at any given time! However, there is good news. With a good jumping off point and the right kind information you can do it. The Internet, as you know by now, is an amazing resource. You can educate yourself while sitting on the couch watching TV after a long week. You don't even have to go back to school full time to get a degree in chemistry.

Initially, you'll want to get an understanding of basic things. What makes some chemical formulas dangerous and some not? There are a few basic principles when looking at this information: health, flammability and physical hazard. These are referred to as HMIS (hazardous materials information system) scores on every chemical product you purchase. You can find these in a MSDS document that comes with all chemicals. Here are a few examples:



**Great = 0-0-0**

**Good = 1-0-0**

**It's not going to kill me, but it's cheap and works ok = 1-1-1**

**Why can't I breathe that well and why are my hands burning? = 2-1-2**

**This smells funny and my hands are burning and I can't see that well but this stuff is cheap and works great. Hey, why is my paint fading on my truck after just six months? = 3-1-1**

Although, nothing is perfect, this will give you a little insight into what is harmful and what is not—degrees of bad and better.

The next step is review, recommend, replace. Review your options, select some products to test and calculate the true cost of these eco-friendly products. There are many variables when finding the true cost. Some are hard costs and some are soft—including total cost, dilution, handling the products and even insuring harmful chemicals—but in the end they add or subtract from your bottom line. However, first they have to work then they need to be cost-effective.

Lucky for us, in recent times, people have gotten smarter in some ways. I can't say that for everything, but we seem to care more about our environmental future. It has gotten cool to be conservative and recycle pick up our trash and ride a bike to school or work. This chemical business is the last real hurdle in this movement and, arguably, the most important.

It isn't always easy doing the right thing. I don't have to be that smart to know that. However, when I have done the right thing, it's one less thing I have to think about when I look at myself in the mirror before I head off to lead my company down the road to a safer more profitable business and, hopefully, I can leave a legacy for my family and maybe future generations.

Good things are coming— this is the greatest country in the world. Don't be afraid of embracing change. | **WA**

*B. Scott Taylor is CEO of Green Endeavor (Portland, OR), a company that provides better solutions for all industries. Prior to that he was the President and founder of TAOW, a modern marketing agency, and Co-Chairman and Founder of Virtual Relocation.com (Move.com) the Internet's first and largest re-location mega site. He is a published author and frequent speaker on subjects that include sales, marketing and business strategy. Currently he is very interested in helping companies replace the bad stuff with the good stuff that works. To learn about a toxic reduction plan, or if you are interested in more information about the rating scale or would like specific links, e-mail [info@greenendeavorinc.com](mailto:info@greenendeavorinc.com) or visit [www.greenendeavorinc.com](http://www.greenendeavorinc.com).*

Waste Advantage Magazine is excited to partner with Green Endeavor to commit to this toxic chemical reduction in the waste industry—the final step in the long process to be green. From July to September, we are asking people to commit to this movement that will be celebrated at the Waste Expo 2014.



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It is with great pleasure that I congratulate both **MCS** and yourself on your thirtieth anniversary! Having over fifty locations in eight states has made container and compactor painting and repair a major focus in our attempt to control our costs while maintaining our image in the marketplace. Over the past decades, we have tried in-house maintenance as well as using outside vendors. In-house maintenance was and is a very expensive option. Using outside vendors was an experience that was haphazard at best, until we met **MCS** and your team. Now, we know that we can rely on our containers being repaired and painted according to our specs and I can personally rely on the comfort that I will not get a call from an irate customer or motorist that "overspray" covered their building or car, or that any damage occurred in the process of painting on customer sites. I also like that, at our larger sites, your crews will come to our yards and repair and paint larger amounts of containers and compactors. Although I realize I have some different managers who are more demanding than others, your team satisfies both types.  
**Congratulations Tony & best wishes for the future. — John Jennings, President & CEO, Waste Pro USA**

Congratulations, Tony, on **Mobile Container Services's** 30th anniversary of service to the waste industry! For the past 21 years, we have appreciated working closely with you and your people on making outsourcing of container repair an acceptable and credible part of the industry. While the path hasn't been easy, I have always respected the way you handle your business putting your customers first by providing honest, competent container repair at honest and reasonable value to the customer. As an industry veteran of 21 years I can honestly say that you guys are the best!

— **R.P. "Pete" Fairlamb,**  
**National Sales Representative**  
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I am pleased to say **MCS** has been a First Piedmont Corporation vendor since **MCS's** inception 30 years ago. **MCS's** service has always been prompt, fair and professional. Our needs for container maintenance ebbs and flows and **MCS** has always been able to step up to the increase in demands in a time frame that is remarkable. It has been a pleasure to work with such an accommodating company and I wish all my vendors were of the quality of **MCS**. We look forward to many more years of **MCS's** excellent service. **Congratulations to MCS on their 30 year anniversary.**

—**Tommy Stump, President/CEO, First Piedmont Corporation**

Looking back, it almost seems like Tony Lundy and Mobile Container Service were there from the beginning, but not so. When I first started with Waste Management in 1976 having come from SCA Services in Atlanta, one of our first challenges was a storage yard FULL of containers needing repair. Due to the growth of Waste Management during that time the containers were of many colors and sizes from the acquisitions taking place. Managing container and compactor repairs was always a large part of and frankly a serious distraction from the business of managing a heavy truck repair facility, the two do not easily mix. A few years later, when **MCS** first visited me in Atlanta I must admit that I was very skeptical that this kind of service would work out. Fortunately, after a while it became apparent that **MCS** was a "PIONEER" in the waste industry. They were filling a need that had, been virtually untouched in the past. Others quickly stepped into the business and tried to duplicate **MCS's** success but most quickly failed — some were unethical. Tony has always kept **MCS ABOVE BOARD AND ETHICAL**, when disagreements occurred (as they do in all businesses) Tony addressed them quickly and honestly. Tony learned and adjusted his business along the way to become the superior support business they are today. **Congratulations, Tony to you and your team for your outstanding 30 years of service to the waste industry.**

— **Larry Jones, Waste Management,**  
**Southern Area Maintenance Director (Retired)**

Congratulations on 30 years of service to the solid waste industry! Container maintenance is a necessary evil in our industry. For most companies it is extremely time consuming and costly. Finding the time and talent to get the job done can be challenging. It simply doesn't make any economic sense to pull your maintenance crews away from the fleet to handle projects they are ill equipped and untrained for. That's where **MCS** comes in. With 30 years of experience and a **ROCK SOLID REPUTATION**, you can rest easy that the job will get done! Big job, small job, their experienced, reliable crews tackle the job aggressively. There is no waste of time or material! **MCS** has companies located conveniently across the nation and can respond immediately. Even better, you have special needs or concerns, the president of **MCS** is literally a phone call away and personally stands behind his work. Tony Lundy was raised "Old School". His word is his bond and he strives to provide the best in service, quality and price. We've all heard the warning, "The sweet taste of **CHEAP** labor is quickly bittered by poor quality."

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**Tony Lundy's Mobile Container Service has Art HenSchen's highest recommendation!**

— **Art HenSchen, Trash Master**

Ever heard this? "Just give us a chance to show what we can do?" By 1983, Jim Becker, who ran our Haw River Operation, decided to give **Tony Lundy** a chance to show he and Roger Davis what **MCS** could do for containers on the yard or on the job at over **30 HAULING OPERATIONS**. Waste Industries has been watching for 30 years and so far we haven't matched their quality or price for container maintenance, so...we just keep letting them show us what they can do. **Congratulations to MCS for 30 years in the industry. They are truly a company that is respected throughout the country and I highly recommend their services to anyone.**

— **Lonnie Poole, Founder/Waste Industries**



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## Keep Waste Where it Belongs: Storage Solutions for Solid Waste Companies

Alyssa Davis

**While landfills have proven to work well in the past, SPACE IS FILLING UP, AND THE AMOUNT OF WASTE IS INCREASING. A more long-term storage solution will prevent contamination and prove to be a great choice for any solid waste disposal company.**

**WITH CURRENT LANDFILLS REACHING FULL** capacity and the growing emphasis on recycling, it is critical that companies and individuals nationwide starting developing their own solutions to solid waste storage. As budgets are shrinking, finding a cost-effective way to store ever-increasing amounts of solid waste is not an easy task.

The term solid waste refers to common items used and then discarded. Some of these items may be recyclable, while others cannot be reused. Solid waste comes from residences, schools, hospitals and businesses, and while some locations have town and city waste companies, many hire outside companies to do the job. Of the four main components of the solid waste industry, three need a large amount of space for proper storage. These include landfilling, recycling and composting. Covered storage is a necessity for these forms of solid waste to protect it from the elements,

such as rain and snow, which can create a waste stream and contaminate the environment.

### Using Landfills

While regulations on solid waste storage may vary, most towns and states follow the same principle. Solid waste must be stored in a way that prevents a waste stream from harming the surrounding environment. States must comply with EPA regulations for storing solid waste, which leaves few efficient storage options.

One of the most common places to store solid waste is in landfills. Landfills are sections of land that are cordoned off to protect the environment from hazardous runoff and other forms of contamination. Landfills cannot be located near environmentally sensitive areas including wetlands, faults and flood plains where there is an increased chance of contamination. They are constructed on top of liners, which are on top of

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about two feet of compacted clay. This is to be sure that no contaminants leak through the liner into ground water below. Though landfills are very popular, they are filling up quickly and it is difficult to find new locations that meet the requirements to construct new landfills.

### Emphasizing on Recycling and Composting

The first step to decreasing the amount of waste that goes into landfills is to increase the emphasis on recycling and composting. Recyclable products are now required to be sorted from other waste in many states. By recycling paper, plastic, cardboard and other materials, the amount of unusable waste will be reduced and less space will be required for its storage. Though you have to store recyclable materials as well, they will only remain in this location for a short period of time, meaning that other recyclables can be stored in the same space as they wait to be processed.

Composting is also a great way to reduce the amount of solid waste entering landfills. Composting processes biodegradable waste, such as kitchen scraps, leaves and manure, and turns it into a highly effective soil for growing crops. Not only does composting decrease waste, but the end product will help plants grow more quickly into healthy, lush fruits and vegetables. Composting can be done in structures or in large piles. Leaving exposed



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## Keep Waste Where it Belongs: Storage Solutions for Solid Waste Companies



As this Kansas City glass recycler found, a fabric structure is a cost-effective way to keep unprocessed glass out of the elements.

piles, or piles under tarps, will most likely lead to runoff contaminating the environment, so structures are the most efficient place to create composting piles.

### Building Options

Buildings can be used for storing waste that normally would end up in a landfill, as well as recycling and composting piles. There are a variety of building options that can be constructed by waste and recycling companies for this purpose. Wood, steel and tension fabric structures are the most common types used for solid waste storage. Wood and steel are more traditional building types for these applications, but recently fabric structures have been increasing in popularity for solid waste storage. There are many factors to consider when choosing which type of structure will best fit your company's needs.

### Size of the Structure

One of the most important factors in building choice is the size of the structure. Wood structures commonly have a maximum width of 150', but can be constructed to any length. Metal structures have predetermined dimensions set by the manufacturer, so customization can be difficult. Fabric structures are often available in widths up to 300' and can be built to any length. Unlike wood or metal structures, if needs change down the line, the length of fabric structures can be easily added to at any time. This is because fabric buildings can be extended simply by adding on extra trusses and extending the fabric cover rather than taking down a portion of the building in order to add on to it.

### Weather

Wind and snow-load ratings are also crucial when deciding on a solid waste storage structure. Naturally, buildings must be constructed to meet local building codes in your area. Fabric buildings can be custom designed to meet wind and snow-load ratings in any location, including hurricane-prone spots with winds loads up to 150 mph.

### Materials

When working with a contractor to construct your building, be sure you are aware of the materials they are using. For example, if you are

building a wood structure, ask the contractors what grades of lumber they plan to use. Lumber also needs to be checked for any defects to ensure the structure will be durable and long lasting. If you've chosen a metal building, the gauge of the metal is important. Most commonly, these buildings are made of 29-gauge steel sheets. For fabric structures, the highest quality manufacturers will use triple-galvanized structural steel tubing, which stands up in corrosive environments like solid waste facilities.

## Foundation Type

Another aspect in choosing the building for your needs is foundation type. Many buildings, such as wood and steel structures, need costly concrete foundations to be poured prior to the building being installed. Concrete foundations can take up to a few weeks to install and dry, adding on to your project timeline. Fabric buildings, on the other hand, do not require a foundation. You can simply anchor the building and it will stay in place. For fabric buildings, there are many types of anchoring options available, from poured concrete, to shipping containers, to block, to helical anchors.

Helical anchors drill directly into the ground and involves minimal site work. Classified as 100 percent temporary, they do not require concrete or a foundation. They can also remain in place for as long as necessary without being replaced. Helicals are environmentally friendly because they can be removed without disturbing the surrounding area. Less expensive than traditional anchoring, this ground screw option is fast and convenient. They can be used for virtually any type of building and have proven successful in the waste and decontamination industry. Some options are better than others for solid waste applications. For example, concrete blocks are easy to move if necessary and are very affordable. These blocks can be stacked to increase or decrease the height of the building, which is a great option for waste containment since piles can grow very large.

## Lifetime Expectations and Warranties

The last important factor to take into consideration when choosing a building is the lifetime expectations and warranties. The structure you choose will be a crucial part of your company, so it should be guaranteed to last for an extensive period of time.



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## Keep Waste Where it Belongs: Storage Solutions for Solid Waste Companies

With the necessary maintenance, wood buildings have a lifespan of about 20 years, and a metal building will last anywhere from 10 to 15 years on average. Manufacturers of fabric structures consider the average lifespan of their fabric covers to be 25 years, while the frame should last a lifetime. The average warranty on fabric covers is 15 years. Tension fabric buildings offer the longest lifespan, are highly customizable and can be built to meet the needs of your specific location. They also have an advantage when it comes to construction timelines. Most fabric buildings take less than a week to install, while wood and metal structures require long timelines, costly foundations and frequent maintenance. Fabric structure maintenance is limited to a twice yearly inspection of the building components and tightening of bolts when necessary.

### Fabric Structures

Fabric structures have no internal support posts, which also makes them ideal for waste storage. Equipment can easily be moved in and out of the structure, and can be maneuvered inside with no obstructions. The high clearances these buildings offer allow for larger piles to be stored inside. Their abundant natural light also creates a safe work environment for employees who are operating machinery inside the structure, and adds to their economical nature.

Fabric structures are the most economical structure option because they are often up to 30 percent less expensive than wood and steel buildings. The natural daytime light that filters through the covers eliminates the need for artificial daytime lighting, which creates a significant reduction in energy costs.

At night, the white interior of the cover reflects light, meaning less fixtures are needed to illuminate the building.

Tension fabric structures are the newest option on the market for solid waste storage, but they are not a new technology. Fabric buildings have been common in the agricultural industry since the 1950s. They are used for hay and equipment storage, livestock housing and more. Many livestock buildings are exposed to very corrosive conditions, especially when housing pigs or poultry. These structures have proven to be a great option for hog and chicken farmers, as the frames do not rust or rot in these applications. Due to the large variety of benefits and affordable cost, tension fabric buildings have become popular in many other industries, including waste storage and handling.

With so many options for solid waste storage structures, managers and executives of waste disposal companies need to be aware of the advantages of disadvantages of each type, while focusing on what is most cost-effective and efficient for their business and location. While landfills have proven to work well in the past, space is filling up, and the amount of waste is increasing. A more long-term solution will prevent contamination and prove to be a great choice for any solid waste disposal company. | **WA**

*Alyssa Davis is the Marketing Production Manager for ClearSpan Fabric Structures (Windsor, CT), a leading manufacturer of tension fabric buildings—all made in the USA. ClearSpan specialists guide customers through the process and communicate with in-house design, engineering and manufacturing teams. For more information, call (866) 643-1010 or visit [www.ClearSpan.com/ADWA](http://www.ClearSpan.com/ADWA).*

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# Using Readily Biodegradable Fluids in Waste Applications to Deliver Performance and Sustainability

Patrick Van Every

**As the waste collection industry pursues greater profitability and an enhanced reputation in serving its communities, readily biodegradable products stand ready to deliver THOSE TWO KEYWORDS THAT GO STRAIGHT TO THE BOTTOM LINE—PERFORMANCE AND SUSTAINABILITY.**

## PERFORMANCE AND SUSTAINABILITY—TWO

words with growing importance in the waste industry. Performance is a must-have for waste collection fleets to efficiently serve their communities, while the way that service is carried out and the equipment used in service continue to provide an opportunity for enhanced sustainability. Despite engine technology and alternative fuels remaining at the forefront of this discussion because of their significant effect on expensive fleet equipment, other areas of operation are experiencing shifts as well. The use of readily biodegradable, biobased hydraulic fluids in place of traditional petroleum-based fluids is becoming more widespread in the waste industry.

## Sustainable Fluids Defined

With the advance of sustainable operations, many products claim to be “green” in an attempt to capture waste companies’ attention and take advantage of their legitimate corporate desire to reduce their impact on the environment in the neighborhoods and communities in which they operate. Many of these products fall short, both on performance and true sustainability.

For a product to be biobased, the materials or chemicals used must be derived from renewable biological resources—often plants. By using naturally

occurring materials and chemicals, products are able to more easily return to their natural state through degradation. In contrast, petroleum-based products are derived from non-renewable resources, as there is a finite amount of those global resources. The U.S. Department of Agriculture (USDA) even recognizes products that meet its BioPreferred program standards. The program is intended to promote the increased purchase and use of biobased products.

In terms of biodegradation, claiming a product is biodegradable means next to nothing in terms of its realistic impact on the environment. Many people often say a product or substance is biodegradable, thinking that such a term indicates it is less damaging to the environment, but in fact, oil and other potentially harmful things for the environment are biodegradable too—just after a long period of time. Biodegradation occurs when a given substance or fluid’s chemical bonds weaken and break. In some cases, potentially toxic residue may persist in the environment after the biodegradation of petroleum-derived fluids.

There are technical terms like inherently biodegradable and readily biodegradable to describe the rate at which a substance or a fluid degrades and is recognized as a food source by the natural environment. That rate of biodegradation is driven by a number of factors, including the make-up of those original chemical bonds,

Along with readily biodegradable hydraulic fluids, the Emerald Coast Utility Authority uses compressed natural gas for its collection vehicles.



Photos courtesy of RSC Bio Solutions.



The City of Phoenix, AZ, uses waste collection vehicles that display their CNG and readily biodegradable fluid initiatives.

the temperatures that the substance is being exposed to, the availability of natural enzymes to consume the remains as food and the presence of water and oxygen. All of these factors need to be present in order for biodegradation to occur.

Readily biodegradable specifically defines a substance, fluid or composition that will degrade 60 percent or greater within 28 days or less. There are several internationally recognized ASTM tests that confirm this characteristic of a given product and allow companies to back up a readily biodegradable claim. In fact, the Federal Trade Commission (FTC) even requires companies who use the term readily biodegradable in describing their products to state the test (for example, "ASTM 5864 compliant") in validation of the claim.

While the FTC has protections and guidelines in place to help protect waste companies and prevent suppliers from "green washing" their products, it is critical that the waste industry understand the basics of biodegradation when dealing with hydraulic fluids, degreasers and other similar products. Asking the right questions upfront ensures that when spills occur and remediation is needed, the company understands the full implications and reduced effect their products will have on the environment.

## Performance Fluids in Action

From a performance standpoint, many of these eco-friendly products, legitimate or not, in the industry have not fared well in the past. These fluids or degreasers provided a trade-off between performance and sustainability. That trade-off has been eliminated by some suppliers, who are now able to produce readily biodegradable, biobased products that match or, in some cases, even exceed the performance of their petroleum-based counterparts in viscosity range and wear performance. Equipment manufacturers and hydraulic suppliers continue to give approval to these products because they meet the equipment performance standards.

One performance characteristic of certain readily biodegradable fluids is performing in temperatures of -40° to 200° F and pressures up to 5000 psi. With the ability to work in extreme temperatures, downtime from winter lows and summer highs can be diminished. These types of products are ideal for mobile hydraulic systems operating in environmentally sensitive areas, like neighborhoods and municipalities.

Another performance benefit seen in certain readily biodegradable fluids is longevity. With some readily biodegradable products, waste haulers are seeing enhanced wear protection and longer oil lifecycles, which keeps the equipment up and running longer and with fewer maintenance cycles. The fluids in action also deliver a benefit to the fleet maintenance or operations team as they interact with the hydraulic systems and equipment. The biobased products deliver intrinsic health and safety benefits compared to petroleum-based products. In overall performance, these types of biobased products allow waste collection fleets to maintain or improve their performance levels with the added benefit of a safer, more sustainable product.

## Bottom Line Benefits and Beyond

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# Biobased Products Keep **EMERALD COAST** **GREEN**

Outfitting waste management fleets with effective hydraulic fluids that enhance work truck performance can help fleet managers meet crucial operational objectives. Today's biobased chemical solutions have succeeded in debunking the myth that "green" products fail to work effectively for waste management fleet vehicles. Biobased hydraulic fluids not only meet or exceed the performance of conventionally-used, petroleum-based fluids, but also help mitigate the financial and environmental risks of using these hazardous fluids.

Sustained use in the Emerald Coast of Florida has shown the unique benefits and value of incorporating readily biodegradable hydraulic fluids into waste management fleets. The Emerald Coast Utilities Authority (ECUA) is charged with promoting the quality of life of the Emerald Coast by providing water, wastewater, and sanitation services in an effective and efficient manner and it has implemented key sustainability projects in the region under the branded program, "Live Green."

In an effort to continue its mission to maximize value for its operations, as well as its customers and the environment, ECUA began its search in May 2007 for a long-term eco-friendly product purchase to phase into its fleet and equipment. The Authority turned to EnviroLogic® 168—a readily biodegradable and biobased hydraulic fluid from RSC Bio Solutions. ECUA has been using the EnviroLogic 168 product in its fleet for nearly six years, and has switched over nearly 400 pieces of equipment—including waste collection and sewer vacuum trucks to backhoes—from petroleum-based products to readily biodegradable products. This particular readily biodegradable hydraulic fluid is fully compatible with the range of equipment in ECUA's fleet.

This unique hydraulic fluid is readily biodegradable, non-hazardous ISO 68/SAE 5W40 multiviscosity grade hydraulic oil for use in general purpose hydraulic systems and is a direct replacement for petroleum oil based hydraulic fluids, helping to further reduce ECUA's environmental impact. As a readily biodegradable product, it is defined by ASTM 5864—the standard test method for determining biodegradation of lubricants and their components—as those that degrade by at least 60 percent within 28 days.

"When we started looking for a suitable eco-friendly alternative to hazardous, petroleum-based hydraulic fluids, we realized that not all readily biodegradable fluids are the same," said Mike Powell, ECUA's Materials Management Supervisor. "In order to meet the high-performance needs of our waste fleets and equipment, we had to look for solutions that would help protect the environment and our customers without performance tradeoffs. RSC Bio Solutions' EnviroLogic brand hydraulic fluids are the only products that meet both of those needs for us and the results we've seen over the past six years have been exceptional."

ECUA has also seen marked improvement in their vehicle maintenance program, on account of oil sampling and analysis services provided by RSC Bio Solutions and EnviroLogic 168's enhanced wear protection and longer lifecycle, which allows them to reduce changeover frequency. The increased performance characteristics of biobased hydraulic fluids help to keep equipment running well, while also delivering intrinsic health and safety benefits for the employees who interact with hydraulic systems and equipment. Compared to its petroleum counterparts, EnviroLogic 168 is biobased, creating a far safer work environment for employees who come into regular contact with hydraulic fluids.



One example of readily biodegradable biobased hydraulic fluid is RSC Bio Solution's EnviroLogic 168 fluid.

These products are able to reduce the workplace hazards and environmental risks associated with spills or leaks that can not only tarnish a company's reputation, but also lead to costly remediation involving cleanup, potential regulatory fines and equipment or employee downtime.

The challenge remains for waste collection fleets to meet today's ever-increasing regulatory and safety requirements while satisfying the public's need for environmentally friendly, low-impact waste management. To that end, readily biodegradable fluid suppliers look to formulate products that meet a wide variety of environmental regulations and standards. Spills of readily biodegradable products are often viewed by regulatory agencies differently than petroleum-based spills, and this effect can positively impact a company's spill response, costs and, ultimately, operational productivity. Companies who take full advantage of readily biodegradable fluids and cleaners will also incorporate information about these products into their public relations activities, along with other sustainable improvements like alternative fuels. Educating communities can go a long way in mitigating any spill even before it happens.

Along with savings from potential spill remediation, the longer oil life that some readily biodegradable biobased fluids deliver relative to petroleum-based fluids leads to maintenance savings that add up significantly the more pieces of equipment a company has in its fleet. Additionally, some providers of hydraulic fluids and gear oils, offer a fluid analysis program to further quantify product durability and demonstrate the reduced maintenance costs.

As the waste collection industry pursues greater profitability and an enhanced reputation in serving its communities, waste collection companies should consider every part of their operation as an opportunity for analysis and improvement. Hydraulic fluids and degreasers are one of those areas. Phasing out more hazardous, petroleum-based chemicals and replacing them with readily biodegradable, biobased products reinforces a company's commitment to creating a safer workplace and community environment. Readily biodegradable products stand ready to deliver those two keywords that go straight to the bottom line—performance and sustainability. | **WA**

*Patrick Van Every is the solid waste market manager for RSC Bio Solutions (Charlotte, NC). He is a respected industry veteran who brings more than 20 years of experience with regional and national waste companies including Waste Management, American Waste and Waste Industries. Established in 2010, RSC Bio Solutions is an affiliate of RSC Chemical Solutions and is focused on providing high-performance chemistries that are safer, non-hazardous and environmentally responsible. To expand its offerings further, RSC Bio Solutions' parent company, Blumenthal Holdings, recently acquired a controlling interest in Terresolve Technologies, Ltd. and its EnviroLogic® product lines, including readily biodegradable functional fluids and oils that are tested and proven in some of the toughest environments possible. For more information, visit [www.rscbio.com](http://www.rscbio.com).*

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## Basic Locomotive Safety Measures

Steve Christian

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### THERE IS A CONTINUOUS PUSH BY RAILROADS

to incent customers through rail rate differentials to ship more cars per train and that in turn requires larger shipping and receiving rail yards. To simply handle larger trains or more railcars per shipment, a shipper or receiver generally needs to move away from traditional railcar switching methods, such as track-mobiles or front end loaders equipped with couplers, to more capable methods using industrial locomotives. Industrial locomotives are generally classified as those that are less than 1,500 horsepower and most are four axle locomotives designed to accommodate tighter turning radiuses than say six axle road locomotives.

Running locomotives and pulling large groups of railcars is significantly different than the one to three railcar switching operations a typical transfer yard or landfill operation is accustomed to. A bent toward safe locomotive operations is important, which is why this month's article focuses on basic, important locomotive safety measures from which industrial shippers can benefit.

### Six Basic Locomotive Safety Measures

In the late 1960s, I began my railroad career as a Laborer. I worked in both the Car Department and the Roundhouse doing the tasks that more skilled personnel didn't want to do. I didn't realize it at the time but this experience gave me a lot of information that I still draw from today. The locomotive engineers that I came in contact with were very fussy when it came to the condition of the locomotives that they operated. Items that seemed minor to me were not viewed that way back then. I was reminded that a 100 car loaded train with 100 ton cars meant that they were pulling over 26

million pounds, which are difficult to get moving from a dead stop and difficult to stop when in motion. Any conditions on the locomotive that hindered the reaction of the engineer or the performance of the locomotive could have disastrous effects.

While industrial switching rarely involves moving and stopping 100 loaded cars, the standards of safety should be the same. Let's touch on a few of them that are low hanging fruit but very crucial:

- *Sanders:* Despite what many people think, sanders are not just for wet or icy conditions. Sand must be available at all times to avoid wheel slip when pulling heavy loads or to apply sand for emergency stopping. Therefore, sanders must be checked for proper operation daily and sand boxes kept full.

- *Clear Vision:* Clean windows daily with a non-streaking cleaner. Oil from the stacks and other greasy contaminants hit your windows every day. If the sun hits a greasy, streaked window you will have a difficult time seeing hazards or personnel. A few minutes of cleaning windows could save an injury or equipment damage. All locomotives had sun visors applied originally. Over the years many are no longer in place. Just like with an automobile, sun visors are a necessity for safe operation.

- *Clean and Clear Walkways:* You put great emphasis on eliminating clutter and spills in your facility. Your locomotive should be treated the same way. Trips, slips and falls can be easily avoided by a basic housekeeping regime for your locomotive. Note the walkway clutter on the end of a switch engine shown in **Figure 1**.

- *Lights:* Check all lights to make sure they are operational. By all lights, I mean all headlights class lights, number lights, engine room lights, cab lights,

Figure 1: Clean and clear walkways.



Figure 2: Oil and sludge cover the engine room floor.



gauge lights, rotating lights and under deck lights. Replace defective bulbs and repair shorts as they are found. Headlights should be used at all times of day. They should be on full beam for the direction you are going and low beam for the opposite end. It improves your vision in reduced light situations and makes you more visible to others at all times.

- **Brakes:** Perform a set and release test before operating the locomotive every day. Check the brakes shoes for wear and observe the piston travel measurement. Replace shoes as needed and adjust the piston travel if needed before you put the locomotive in service.

- **Engine Room Cleanliness:** Keep the engine and engine compartment clean. The accumulation of engine oil and other fluids can create a fire hazard. When the engine is regularly cleaned, you can easily spot and report leaks for remedial action. On the railroad, FRA (Federal Railway Administration) regulations prevent the cleanliness of the engine room from getting out of hand. In industry, this issue comes under OSHA. In my experience, OSHA does not pay a lot of attention to this. In fact, I have seen the accumulation of oil and other assorted fluids cover the engine room floor a couple of inches deep.

There are floor drains which allow fluids to drain. In this particular case, they were so concerned about the ugly trail of oil up and down their tracks that they plugged the drains. Don't do this! Note the buildup of oil and sludge on the engine room floor in Figures 2 and 3, and the dust buildup in Figure 4.

These are just a few very simple items that can save an injury or equipment damage. There are many more that can be implemented to increase the safety of your operation.

### Vital to Your Operation

Your locomotives should be viewed as another piece of equipment vital to your operation. The same level of cleanliness and order should be employed here as anywhere else in your facility. | **WA**

*Steve Christian is the Manager Value Creation-Railcar Performance Manager for Tealinc, Ltd. (Forsyth, MT). Steve's career includes positions as Vice President and General Manager of DTE Rail, Regional Manager PRB for Progress Rail and a wide variety of railcar mechanical experience from Carman on the Burlington Northern Railroad to Assistant Shop Superintendent on the Rock Island Railroad. He can be reached at (308) 675-0838 or via email at [steve@tealinc.com](mailto:steve@tealinc.com).*



Figure 3: Engine room covered in oil sludge and dust.



Figure 4: Dust covers the engine compartment.

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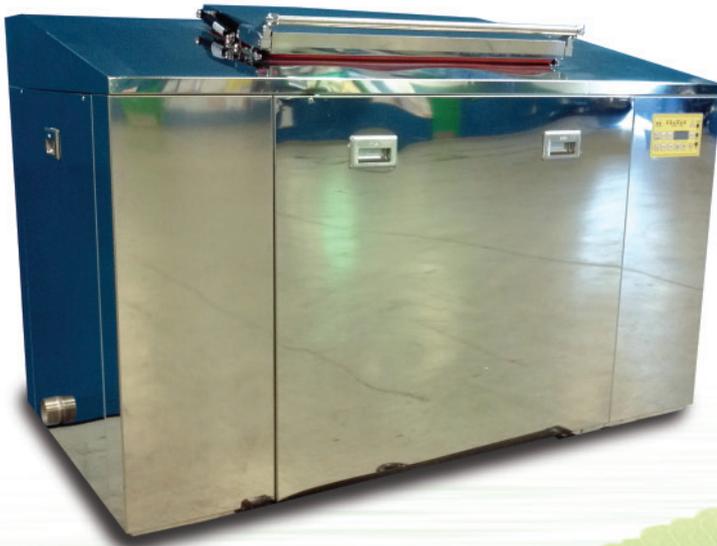
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The Advantage in the Waste and Recycling Industry

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*Waste Advantage Magazine's* Recycling/Transfer Stations/Landfills (R/T/L) section has become a very important part of our readership. Our timely, relevant editorial in this section—products/services releases, statistics, short tips, etc.—provides you, our R/T/L professionals, with the useful information that you need when making that important purchasing decision. By making this important move, *Waste Advantage Magazine*, provides something for everyone in the waste and recycling industry and makes it the most complete one-stop-shop publication available today. We look forward to expanding our coverage of this segment of the industry and hearing your feedback.

## Shredders

# 19 Considerations When Buying a Shredder

Lane Blount and Chad Phares

**IN TODAY'S ECONOMY IT IS CRITICAL THAT COMPANIES ENGAGE IN** creative cost saving and money-making activities to maintain their profitability. Innovation and “going beyond normal business activity” keeps a few companies ahead of the curve. Some landfills have figured out the old saying “one man’s trash is another man’s treasure” and are implementing progressive opportunities to uncover and collect marketable materials from the waste flows entering their facilities. When considering a shredder purchase, be sure to address the following points in order to better clarify your final decision.

### Application and Capability of Machine

The first things to consider are the applications where the shredder will be used. Is it a pre-shred application or can it make the final product size

required? One pass, or two, and how much and what kind of material will it process? Will it be used on the same product all the time or for several different products. It is much easier to pay for the machine if it constantly produces sellable product.

### Finish Material Sizing Capability

Is the unit capable of producing finished sellable material? Does the product require further processing or can it be sold as is? What sizing capability does the machine offer? What percentage of the throughput is finished and which portion has to be further reduced?

### Control of Functions/Programs

Is the unit easy to operate? Does it have a remote control system that can

From Waste to Value®: 440D Shark Shredder increasing compaction of a C&D landfill.



Photo courtesy of TANA North America.

be used from the loader? Is the machine “smart” with preset programs for handling different materials? Can you design unique programs to handle specific requirements? Some materials don’t require full throttle operation, so can the engine capacity be adjusted to reduce fuel consumption? Does the shredder automatically reduce its engine capacity to idle when there is a delay in loading? Will it shut off after a lengthy idle time? All these things help reduce the cost of operation.

### **Power Make and Serviceability, Power Options**

Who makes the engine? Is it a common reputable brand with parts available from many sources or do you become a slave to the manufacturer? How easy is it to get consumables and repair parts? Does the unit offer an extended engine warranty? Will the engine be a diesel, natural gas or electric drive? Where does the closest service support come from?

### **Method of Power Transfer**

How does the engine attach to the shaft? Does it use a direct coupling, belt, shaft or hydrostatic drive system? Is there a clutch, a fluid coupler or does it use hydraulic motors? What are the maintenance and repair implications of either?

### **Cost of Wear Parts**

There are many wear parts on shredders starting with the knives (teeth), the counter knives (counter teeth), anvils, wear plates, guards, drive systems, engine, conveyors and more. What is the expected longevity of these items and what is the cost including down time and labor to repair or replace?

### **Cost of Operation**

What is the cost of operating the unit per ton of finished material, not processed material? There is often an available spreadsheet to help in these calculations. Will you have enough material to keep this unit working every day?

### **Fuel Usage and Maintenance Requirements**

These items are usually included in the manufacturer’s



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spreadsheet, and verify accuracy for each make of shredder. A rule of thumb for full load capacity is fuel consumption will be 4 gallons per hour for each 100 HP of engine capacity. If the unit allows you to adjust the engine output for certain operations, the fuel consumption can change. Also, some engine manufacturers recommend servicing the engine at 250-hour intervals, and some at 500-hour intervals. This can be a major effect on the cost of operating the shredder. Certain operating conditions can also require more attention to service. Dusty or dirty environments can impact the bottom line. Keeping the machine greased and lubricated is critical.

### Service, Parts and Training Support

What support is available from the dealer, distributor or manufacturer of the machine? Can you get access to help anytime? Can you get parts locally or is it an overnight response from somewhere? Are there trained support personnel local or do they have to drive in from other areas?

### Knife and Counter-Knife Placement, Size and Expected Wear

Various shredders offer different configurations for shafts and teeth. Some machines are single rotor with larger knives and counter knives while others offer dual shaft designs with smaller teeth. There is great controversy over which design is best as both offer unique benefits for various materials processed. Wear is a critical consideration as it takes time to change teeth. Often, larger and heavier teeth, though initially more expensive, last longer and have to be changed less so the shredder can stay productive.

### Access for Changing Knives

The most frequent maintenance function on a shredder is changing the teeth. Whether they get broken or they wear, it is critical to have good access for changing knives (teeth) and counter knives (counter teeth). How the machine opens up and allows access for quick and easy changes makes a big difference in how enthusiastically operators approach this task. The easier it is, the less resistance there is to taking care of the machine.

### Clean-Out Capability and Access

Similarly, the shredding operation involves materials being hung up and wound around the shaft as they are torn, cut and shredded. Often, it is necessary to stop and dislodge materials that are either not shreddable or are positioned so the shredder cannot process them. How the unit allows for this is crucial. Some units enable auto-reversing of the shaft and can dislodge the hung up materials themselves, others don't reverse and have to be stopped, freed up and restarted. Some units have mechanisms that adjust the cutting chamber in some way to free up clogged materials while others have access doors enabling easy removal and re-start of the shredding operation. Several units are difficult to access with tight spaces and no room to work. Understanding the operation and access to the machine is important in choosing a shredder for the best performance.

### Service Access

Servicing the unit comes around frequently as hours of operation build. Easy access to the serviceable parts is essential to encourage operators and maintenance personnel to perform necessary services to the machine. How the unit opens up makes a huge difference in the time required to perform these tasks.

### Portability Options

Most units are available on wheels or tracks. Environment and how often the unit is moved to different jobsites is the primary consideration. If the shredder is involved in lots of "off road" applications, tracks are a good investment. With tracks the loader/operator can move the unit remotely as required to reach more materials, or to change the direction of discharge. If it is on multiple locations weekly, moving the unit over the road can be the biggest consideration and a wheel-mounted shredder makes more sense. If the material will be brought to the machine, an electric or natural gas driven unit may be ideal to reduce overall operating expenses.

### Monitoring Capability

Keeping track of the operating conditions of the machine helps to reduce breakdowns and maintenance surprises. Most units offer gauges or panels that monitor engine conditions. Some manufacturers offer remote access to the unit's status via the Internet and, from anywhere on a cell phone, management can see exactly how the machine is operating in real time.

### Discharge Measuring Device

Scales can be added to the discharge belts to measure the production of the unit. Some manufacturers allow Internet access to this function as well so management can see current operating parameters in real time from anywhere.

### Height of Discharge

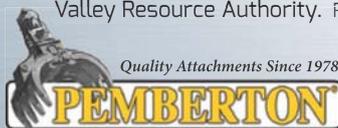
Another factor is the height of the discharge belt. This determines if you can load trucks directly from the machine. Manufacturers offer standard lengths and optional lengths depending on requirements.

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Above, Pemberton® packer grapples on the job at The Roanoke Valley Resource Authority. Photo courtesy of DoMORE Magazine.



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**References From Current Users**

Once you have narrowed the list of preferred shredders, it's best to contact several current users of the machine. Manufacturers can supply a list of references. Make sure to get real feedback from these people, as they have experienced what you will be experiencing in the future. Make sure to research the facts of all the manufacturers, how long they have been in business, how many machines they have out and in what applications.

**Cost of Machine**

Cost is the last factor to consider. Pricing weighs in on every decision of course, but often it's smarter to spend some extra money up front for a feature that can save thousands of dollars in the long run. Shredding any material is a violent action and shredders are tough, but they aren't designed to last forever. Expect an eight- to 12-year life of constant production then look to replace the unit. Not all revenue is profit, there is a significant amount that must be used to purchase and keep the shredder in good working condition. Factor in the business model expenses for a good operator and maintenance and repair cost. This should keep your shredder active and a continued source of making money.

Shredders are great machines that can handle most products. Some are specifically designed for certain materials and applications while others offer flexibility that enables them to be used in a variety of applications. For example, a high torque shredder can process almost any type of waste stream, separate the ferrous metals and make much of the waste into a usable fuel product that can help in the generation of electricity taking the place of coal and minimizing the consumption of fossil fuels. Addressing these 19 considerations can help make a buying decision easier. | **WA**

*Lane M. Blount is Regional Sales Manager for Tana North America, Ltd. and is based out of Cleveland, TX. He can be reached at (832) 594-2818 or e-mail lane@tana-na.com.*

*Cbad Phares is Vice President of Humdinger Equipment (Lubbock, TX). He can be reached at (806) 771-9944 or via e-mail at cbad@humdingerequipmet.com.*

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## Landfills

### Second of Two Parts

# Biogeochemical Clogging of Landfill Leachate Collection Systems: Why It Is Occurring, How It Can Be Cleaned and What Can Be Done to Prevent It

Nathan P. Mayer, Manuel J. Hernandez, Abdul Mulla Saleh, S. Steven Carl and Ralph Calistri

In Part 1 of this article (*Waste Advantage Magazine*, July 2013), the reasons behind precipitate formation in landfill leachate collection systems (LCS) were discussed. Leachate analyses and precipitate mineralogy show that supersaturated conditions with respect to calcium, chloride, sodium, sulfate, etc., as well as the presence of sulfate and iron reducing bacteria (SRB/IRB), play a major role in forming biologically induced calcium carbonate precipitation in a reduced landfill environment. Part 1 also discussed cleaning technologies available to remove precipitate formation from the LCS, and the results of the cleaning demonstrations used to evaluate both the effectiveness and cost of the cleaning technologies discussed. Based on the results of the demonstration and an evaluation of cost, chemical cleaning was determined to be the best technology for removing heavy precipitate buildup, especially in the lower lengths of the LCS, pipe sections with multiple access points, and non-perforated piping. Part 2 will discuss the full-scale chemical cleaning projects employed, including methods used and results.

### Full-Scale Chemical Cleaning

During the cleaning demonstrations, chemical cleaning was successful at removing most of the precipitate formation, especially in the lower lengths of the LCS. Video inspections confirmed that this technology was successful at removing heavy buildup and restoring flow in areas that were clogged and/or appeared stagnant at the beginning of the cleaning demonstration. Chemical cleaning is capable of cleaning over 2,000 feet of pipe per week, which equates to approximately \$20 to \$40 per foot of cleaned pipe.

The chemical cleaning technology was provided by Progressive Environmental Services (PES) (Portsmouth, VA). Prior to the LCS cleaning demonstrations, PES has had extensive experience in cleaning piping system for commercial customers and the Navy, including Collection, Holding, and Transfer (CHT), Auxiliary Salt Water (ASW), fire mains, gray water, clean water systems, and combat related systems including Counter Measure Washdown and Combat System Cooling Loops. Scale and/or debris creates blockages within these systems, which typically consist of both 90-10 copper nickel and stainless steel piping ranging from 1.5 to 10 inches. PES's proprietary products are designed to penetrate, disperse, dissolve, and remove scaling and corrosion by-products, biofilm and all other existing microbial activity. Metal surfaces, seals and gasket materials are unaffected by contact through the use of an inhibitor. The byproducts of the reaction between precipitates and the chemical cleaning solution are calcium, sodium chloride, carbon dioxide and water, all of which are non-toxic and non-hazardous. Once the acid solution has reacted and neutralized, no corrosive ingredients remain and the solution is approved for disposal in sanitary sewer systems.

Using a proprietary, certified biodegradable acid solution consisting of hydrochloric acid, carboxylic acid, alkanolamine and sodium alkylsulfonate with the addition of catalysts, dispersants and inhibitors to protect any associated base metallurgy from acid attack, this technology was shown to be a very effective mechanism in removing heavy precipitate formations and restoring flow in the landfill LCS.

Chemical cleaning projects.



Images courtesy of CDM Smith.

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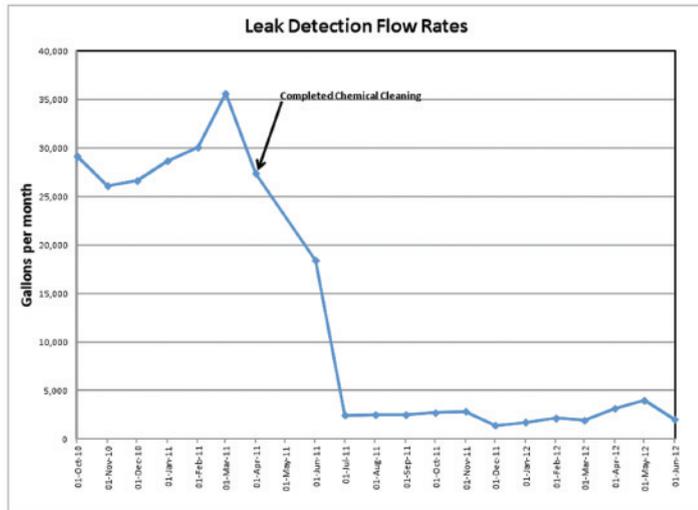
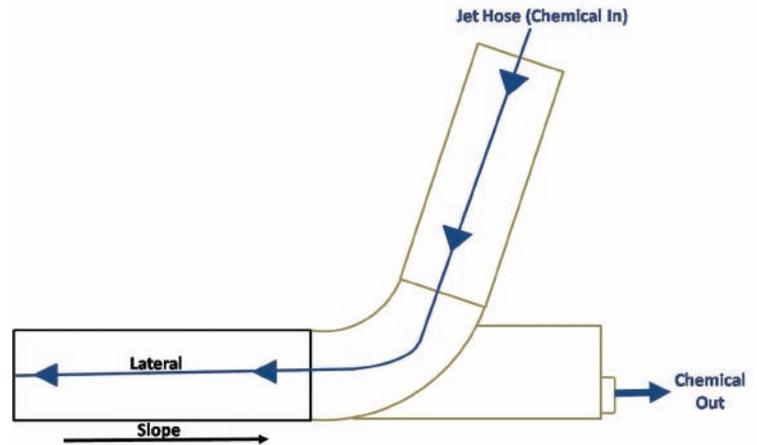


Figure 1: Leakage rate through the primary line.

During the cleaning demonstrations, chemical cleaning was conducted by surging the system with large volumes of solution and allowing the chemical to soak and react with the precipitate. Formulas were modified to create foaming from the cleaning solution to enhance cleaning activity farther into the system and into the aggregate envelope surrounding the perforated LCS pipes. In locations with non-perforated piping and perforated LCS pipe with multiple access points, chemical cleaning was conducted by setting up a “loop” and allowing the solution to pass through and penetrate



The combined high-pressure water jetting and chemical cleaning technology developed (from top: schematic, jet nozzle, actual picture). Images courtesy of CDM Smith.



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to a pneumatic diaphragm chemical feed pump in order to introduce the chemical solution at the end (top) of each lateral. As designed, the LCS laterals conveyed the chemical solution back to the manhole, cleaning the perforated lateral and aggregate filter as it traveled downstream. The chemical solution was then collected at the manhole and pumped back through the jet hose to the end of the lateral. This chemical feed “loop” enabled the team to clean precipitate along the full length of the lateral.

During the full scale chemical cleaning projects, the team was able to remove most of the precipitate from more than 10,000 feet of perforated laterals, 4,000 feet of perforated headers, and 4,000 feet of LCS gravity mains. Post-cleaning video inspections confirmed that chemical cleaning was successful at removing heavy buildup and restoring flow in areas that were clogged and/or appeared stagnant at the beginning of the cleaning projects. Although unquantifiable, it is believed that chemical cleaning was also successful in removing precipitate from the aggregate envelope surrounding perforated leachate collection pipes. The figure below shows the volume of leachate collected in the leak detection system before and after the cleaning demonstration. As shown, the leakage rate through the primary liner was significantly reduced through the techniques employed (see Figure 1, page 50).

### Design and Operational Considerations

In addition to monitoring and maintenance of the LCS, design and operational considerations may help reduce and/or prevent the formation of precipitate. Research has shown that there is a correlation between precipitate formation and leachate flow patterns. Minimal flow and stagnant conditions create saturated zones within the LCS, allowing the formation and growth of precipitate over time, especially where nucleation has already occurred. It is important to keep leachate levels within the LCS as low as possible and controlled by gravity to minimize the inflow and outflow response time within the cells. Maintaining continuous flow within the LCS reduces both sediment buildup and the formation of precipitate within the pipe. Landfill operators should be encouraged to reduce, to the greatest extent possible, storage of leachate within the LCS and within the landfill cells. Additionally, design engineers should consider velocity when designing the lateral drainage slopes of the LCS.

Similar studies have shown that leachate from ash monofills are dominated by high concentrations of dissolved calcium whereas leachates from MSW landfills have higher levels of bicarbonate and microbial activity, but contain lower levels of calcium species. Batch testing has been conducted to evaluate the leaching potential of combustion residues from different sources. To summarize, fly ash tended to yield a supersaturated solution for both calcite and gypsum, but leachate derived from bottom ash was unsaturated for both calcite and gypsum. One reason for the higher level of calcium in fly ashes is the use of hydrated lime, usually in excess, in Spray Dry Absorbers (SDAs) to scrub sulfur dioxide gasses generated from waste-to-energy facilities. Acid gasses react with lime to form solid salts, which are removed in particulate control devices such as baghouses. Even though bottom ash typically comprises 70 to 90 percent of the mass of combustion residues, fly ash yields a higher degree of calcium and other constituents that contribute to the formation of deposits. These results suggest that optimizing the lime slurry flow rate, further stabilization of fly ash, and/or development of alternative ash management and disposal practices may help to reduce the extent of precipitate formation at facilities that landfill ash.

Similar studies have also shown that landfills containing both combustion residues and MSW appear to be more susceptible to clogging due to the relative contributions of each waste stream. Combustion residues provide the minerals (calcium) while the MSW provides biomass, carbonate, and electron acceptors.

Furthermore, landfilling of treatment plant residuals can introduce more minerals (water treatment) and more biomass sources (wastewater treatment) into the landfill. Separating ash and MSW disposal may help prevent or reduce the formation of precipitate at facilities that accept both ash and MSW.

### Conclusion

Clogging in any portion of the LCS can lead to higher hydraulic heads within the landfill, increasing the potential for leachate outbreaks over containment berms and/or leakage through the liner. Leachate analyses and precipitate mineralogy show that precipitate formation can be attributed to supersaturated conditions with respect to calcium, chloride, sodium, sulfate, etc., as well as the presence of SRB/IRB, which play a major role in forming biologically induced calcium carbonate precipitation in a reduced landfill environment.

Cleaning of the LCS was slow and costly due to the magnitude of precipitate buildup in the systems. Chemical cleaning was determined to be the best technology for removing heavy precipitate buildup, especially in the lower lengths of the LCS, pipe sections with multiple access points, and non-perforated piping. Both chemical and mechanical cleaning technologies have distinct advantages and disadvantages, but when combined, the effectiveness and efficiency of cleaning is improved. Full scale cleaning was successful at removing heavy precipitate buildup. Post-cleaning video inspections confirmed that the cleaning projects were successful in restoring flow to areas that were clogged and/or appeared stagnant prior to cleaning. The project team (CDM Smith, Progressive Environmental Services, and Jetclean America) continues to develop and improve the combined chemical/mechanical methods to further increase the efficiency of LCS cleaning. | **WA**

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### References

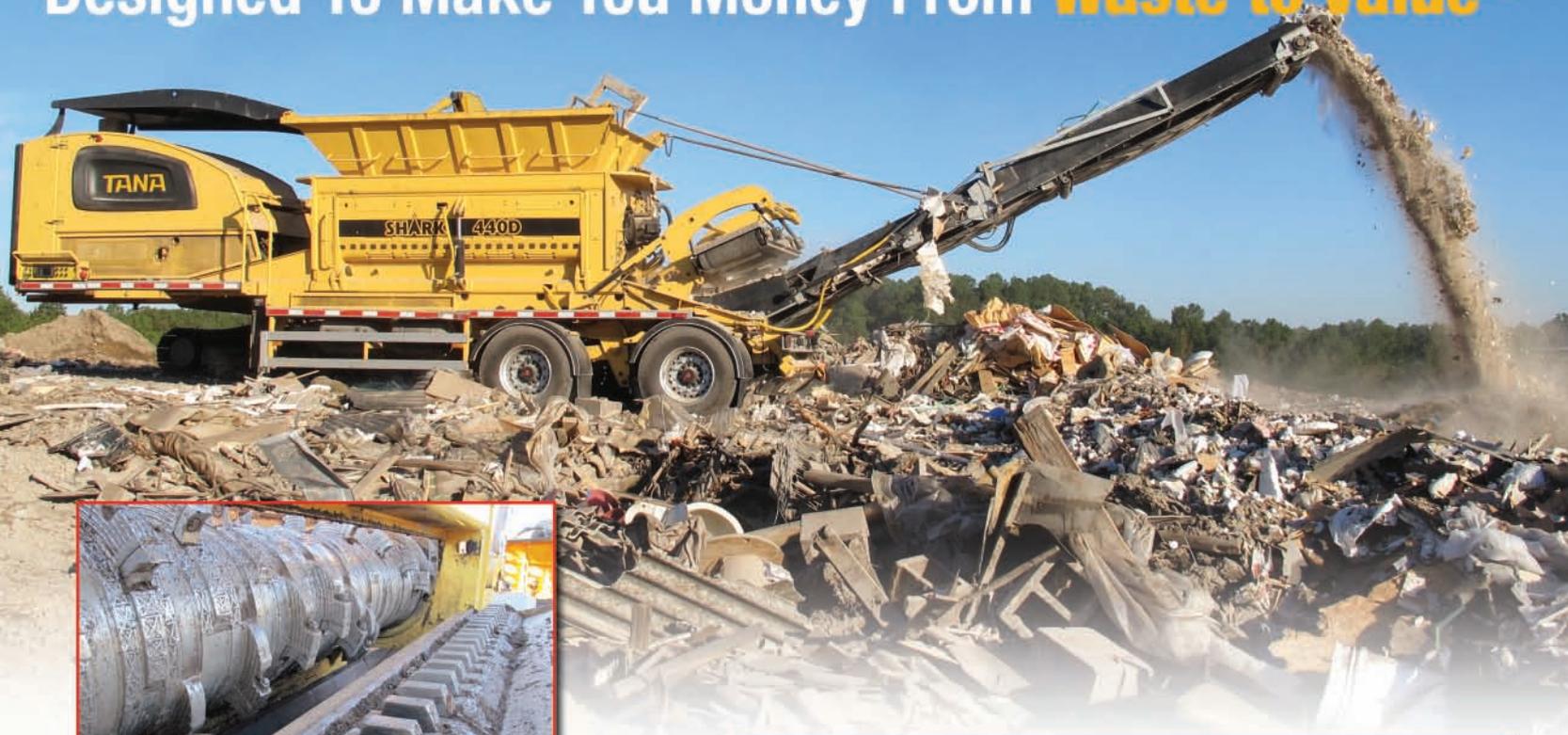
- Cooke, A.J., 2000, “Modeling Clogging of Landfill Drainage Systems”, In Proceedings of the 6th Environmental Engineering Specialty Conference of CSCE & 2nd Spring Conference of the Geoenvironmental Division of Canada Geotechnical Society, London, Ontario, June 2000, pp. 74-80.
- Levine, A.D., 2005, “Assessment of Biogeochemical Deposits in Landfill Leachate Drainage Systems”, Florida Center for Solid and Hazardous Waste Management, Report #0332006-05.
- Maliva, R.G., 2000, “Unusual Calcite Stromatolites and pisoids from a Landfill Leachate Collection System”, Journal of Geology, Vol. 28, No. 10, pp. 931-934.
- Manning, D.A.C., 1999, “Leachate Mineral Reactions: Implications for Drainage System Stability and Clogging”, In Proceedings of the Seventh International Waste Management and Landfill Symposium, Sardinia, Italy, October 1999.
- Rittman, B.E., 1996. “Leachate Chemistry: Its Implication for Clogging”, In Proceedings of the North American Water Congress, Anaheim, California, June 1996.
- Saleh, A.R.M., 2006, “Assessment of Biogeochemical Deposits in Landfill Leachate Drainage Systems – Phase II”, University of South Florida Theses and Dissertations. Paper 2686.

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## Recycling

### Second of Three Parts

# Best Practices for Pay-As-You-Throw— Planning for Implementation

**PAY-AS-YOU-THROW (PAYT) PROGRAMS CAN COME IN MANY DIFFERENT** forms, but one feature of nearly all successful programs is that the municipal leaders implementing them have devoted time and effort to doing things right during the planning stage. No matter what shape a PAYT program takes—bags, tags or variable-rate carts—careful, dedicated planning is a requirement for success. This article, the second in a three-part series about best practices for PAYT, addresses some of the key elements that officials need to consider as they plan their programs. We explored the different types of PAYT programs last month (*Waste Advantage Magazine*, July 2013), and next month we will look at how best to implement a PAYT program.

While planning for a PAYT program's implementation can involve a large number of individual activities, the process can be distilled into three primary steps: gathering data on the community's current solid waste disposal situation, designing the program to meet the community's unique goals and specific needs and understanding the potential benefits of PAYT for the community.

## Data-Gathering

As the old saying goes, you can't know where you're going if you don't know where you are. It's the same with public-sector planning. Before municipal leaders can design a PAYT program and understand its potential benefits, they must first develop a detailed understanding of where their community currently stands in terms of municipal solid waste (MSW) collection and disposal. Gather data on:

- **MSW tonnage:** The first step is to understand how much waste the community currently generates. Municipal planners need to identify the size of the "addressable" population for PAYT—the number of single-family homes and small multi-family dwellings that will receive PAYT collection services (or that make use of the local convenience center or drop-off location). Once they do that, they must gather several years of historical data on the MSW tonnage these households generate. This data provides a baseline that can be used to understand how much MSW may be reduced by the PAYT program.

- **Hauler relationship:** Town leaders need to know everything about how their waste and recycling are transported. Does the community collect its own waste or does it contract with a private hauler? And if it contracts with a private hauler, what are the obligations and terms of the contract?

- **Tipping Fees:** Leaders must gather details about the community's tipping fees, including how much is the tipping fee per ton (including, if applicable, fuel surcharges fees, transport costs, etc.), as well as any potential future changes to those fees. They must also consider the nature of their disposal agreements. For example, a city or town that pays a high per-ton tipping fee may realize substantial financial benefits from a good PAYT program. However, municipalities involved in "put or pay" agreements where they must guarantee disposal of a certain volume of waste—or pay penalties—will benefit less. In either case, a sound PAYT program will provide environmental benefits, but a town does need to weigh the financial implications.

- **Recycling:** Officials should gather several years of historical data on recycling



Pay-as-you-throw programs reduce solid waste volume and increase recycling. Photo courtesy of WasteZero.

tonnage for eligible PAYT households, information about the structure for collecting revenue from the sale of recyclables, and any potential changes in recycling revenue in the next few years. They must also collect details on the nature of the recycling program—source separated or single-stream using bins or carts, and convenience center or curbside collection. Gathering this information will help leaders estimate the additional, incremental amount of recycling that their chosen PAYT program is likely to generate. It will also help them determine whether they can expect to earn extra revenue from those added recyclable materials, and if so, how much.

- **Fee Structure:** Leaders must collect key information about the current solid waste budget and how the function is funded, whether via the general fund or an enterprise fund, and whether residents pay a recurring fee to support the services. Doing this allows the community to understand what its goals for the program should be in terms of balancing revenue and costs.

**Frequency of collection:** Municipalities must document the frequency of garbage and recycling collection, whether weekly, bi-weekly or another interval.

- **Other miscellaneous costs:** Identify other costs that could be affected by a PAYT program, including those for transportation, other waste services, and disposal such as yard waste, bulky materials and compost.

Now that municipal leaders know where they are, they can set the course for where they're going. The data collected here will be used as the inputs for the next two phases of PAYT planning: program design and benefits assessment.

## Program Design

Using the information they have gathered, municipal leaders should move next to designing their PAYT program to perform optimally in their city or town and to meet the community's unique expectations for it. This pivotal point in the planning process is essential to the future success of the program.

The first key question in this phase is about which type of PAYT program is the best fit for the community. The previous article in this series discussed the different options for PAYT programs, as well as the pros and cons of each. Municipalities wishing to implement PAYT can choose from among cash-based programs, overflow programs, variable-rate carts, tag-based programs and bag-based programs. Within each type of program, there can be variations and even combinations. In any case, the key is to design a program that meets important criteria for residents and the municipality. For residents, the program must be:

- Fair and Easy to understand
  - Convenient, user-friendly and designed to incentivize the proper behaviors
- For the city or town, it must:
- Drive the desired results in the near- and long-term
  - Be financially viable
  - Meet the community's environmental objectives
  - Earn high levels of resident satisfaction
  - Represent a minimal commitment of additional resources, if any

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The information that town leaders collect in the data-gathering phase can help them determine which type of PAYT program best matches their needs.

The second part of the program design phase is pricing, and it requires a delicate balance. Planners must weigh their community's needs for revenue-generation with the corresponding need for the program to influence the desired behavioral change—MSW reduction and increased recycling. If the community prices for the program components (such as bags or tags) are too high, residents may balk at the cost and not participate as expected. On the other hand, if the program components are priced too low, residents will not have the full incentive to reduce their MSW and increase their recycling. Designing a PAYT program to strike the perfect balance between revenue-generation and pricing that influences residents appropriately is essential.

### Benefits Assessment

Having gathered data on the current situation and plotted out the structure of the program, the final step in planning is for municipal leaders to use that information to understand what the PAYT program will mean for them and their community. Developing an understanding of what the city or town stands to gain from PAYT in the benefits-assessment phase is valuable in moving from planning to implementation because it gives municipal leaders concrete details about the program that they can use to communicate its value to other stakeholders in local government and with residents of the community. The benefits of PAYT can come from a number of different arenas.

### Financial Benefits

There are two main benefits of PAYT for finances: the net financial impact, and the impact of PAYT on recycling-based job creation. The net financial

impact of any PAYT program is made up of several different elements, detailed below. Some of those elements derive from new incremental revenue, while others are made up of funds that otherwise would have been spent if the community had not adopted PAYT.

- *Tipping fee savings:* The amount of money, previously spent on disposal, that is saved when the PAYT program diverts waste into more productive uses, such as recycling and composting
- *Bag/tag revenues and/or changes in fee structure:* The incremental amount of money collected by municipalities from the sale of PAYT bags or tags, or collected via a new fee structure such as with variable-rate carts
- *Revenue from sale of recyclable goods:* The potential incremental revenue that could be gained from selling an increased amount of recyclables collected with PAYT
- *Savings from operational improvements:* Budget savings from such factors as decreased operating and maintenance expenses for MSW collection vehicles, reduced fuel requirements and labor cost savings

An increase in the amount of recyclables almost always leads to increased employment in the community and the surrounding region. This increased employment can take the form of jobs in collection, processing and remanufacturing. Once the community builds an understanding of how great an increase in recyclables collection they can expect to see, they can estimate the impact of that increased collection on local and regional jobs. As an example of PAYT's significant potential for job-creation, using figures from a 2011 study from the Tellus Institute, if PAYT were instituted nationwide, the resulting increase in recycling would lead to the creation of more than 224,000 new jobs.

### Environmental Benefits

The environmental benefits of PAYT can be very significant, and they can take a number of different forms. With the right inputs and tools, such as the EPA's Waste Reduction Model (WARM), municipalities can estimate the reduction in greenhouse gas emissions as a result of adopting PAYT. Municipalities can also estimate the amount of energy saved and the extension of the life of their local or regional disposal site.

As an example of PAYT's potential for significant environmental impact, it is estimated that if PAYT were implemented in every U.S. community, greenhouse gas emissions would be reduced by an amount equal to the exhaust from almost 20 million vehicles each year, and the amount of energy saved would be the equivalent of installing roughly 100 million rooftop solar arrays.<sup>1</sup>

### Waste Reduction Benefits

PAYT will have a positive impact on MSW and recycling volume; the only question is how much? While it is of course impossible to predict the future, informed communities with good historical data and a strong understanding of their current and future operational arrangements can forecast that impact with a great degree of confidence.

Careful planning for PAYT can give municipal leaders the information they need to build the right program for their community and help them satisfy their unique needs and objectives. Gathering the right kind of information about the community's MSW situation, designing the program appropriately for the community and identifying the benefits of PAYT are key steps on the path toward successful PAYT implementation. | **WA**

The final article in this series will focus on PAYT implementation.

*Greg Peverall is Vice President of Business Development at WasteZero (Raleigh, NC), a company specializing in municipal waste reduction programs. He can be reached at (919) 322-1234 or gpeverall@wastezero.com.*

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## Shredders

# Pre-Shredding and Wind Sifting: Benefits of Better Segregation of Materials

Harmut Bendfeldt

**SORTING THE WIDE RANGE OF MATERIALS THAT ARRIVES AT RECYCLING,** waste transfer stations and landfills is just one of the challenges faced when processing waste. Implementing the right equipment is essential and important benefits can be realized when using pre-shredding and wind sifting technology for waste separation.

### Primary Shredding Solutions

Pre-shredding and wind sifting equipment help extend the life of a landfill due to the better compaction of waste material. A higher volume of materials can also be recycled by pre-shredding waste in a transfer station or MRF. This ensures that even the bulkiest of items get broken down, and allows the addition of more payloads to trailers in the transfer station.

These primary shredding solutions also generate a better segregation of material by using pre-shredding and wind sifting to separate waste into heavy, medium or light classes of material. By shredding the waste before it is baled, bale weight can be increased. Modern waste processes often involve reducing the size and volume of difficult-to-handle materials. Here, shredding is one of the most effective ways of doing so reliably and with low operating costs.

Efficient shredding equipment makes it possible to break down and sort virtually all kinds of material for reuse or recycling. Available in both plant based and mobile configurations and in a wide range of sizes, pre-shredders provide efficient and aggressive shredding of an unusually wide range of materials. They are designed to meet the special needs of plants in which the incoming material is extremely varied in both size and composition, and may

also contain unpredictable components. The combination of a large cutting table and a twin-shaft shredding system makes it possible to shred almost any kind of material and helps to ensure that there are no problems with bridging.

Because they can easily be moved from one place to another, mobile shredders in particular make an exceptionally versatile primary shredder solution. Typically, wind sifting machines are installed after a pre-shredding, screening and ferrous metal removal step to separate the high BTU value material from contaminants like rock, gravel and nonferrous material.

### Three Basic Components

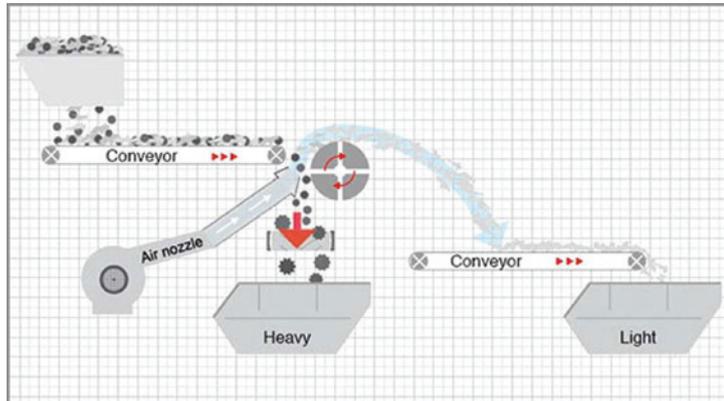
This unique technology essentially consists of three basic components: the conveyor belt, the nozzle and the rotation drum. The input material is preferably spread in a single layer across the entire width of the conveyor belt. The material is then transported at an adjusted speed up to the discharge edge. An adjustable nozzle produces an upward stream of air on the discharge edge.

The air stream gathers on the upper area of the rotation drum and is guided into the expansion room with the laminar flow. The material meets the stream of air and is separated into light and heavy material. The light material reaches the expansion room via the rotating drum. Here the speed of the air is radically reduced and the light materials trickle onto a container or land on a discharge conveyor. The heavy materials fall downward into a container or onto a discharge conveyor before reaching the rotation drum. The volume of air introduced in the expansion room is extracted in the upper area and sucked back in via the fan or guided into a filter system depending on the type of application.

Powerful primary shredders can be exceptionally versatile—ideal for a wide range of applications and materials. Plant based pre-shredder from Metso.

Wind sifting systems are highly efficient and designed to perform with a high degree of separation efficiency. Wind sifting technology from Westeria.





Wind sifting technology allows the separation of the heavy fraction (contaminates) from the light fraction (High BTU Material) in one easy step.

These systems are highly efficient and designed to perform with a high degree of separation efficiency. They allow for easy adaption to any material stream and are available in stationary, semi-mobile and mobile configurations in many different sizes and for different fields of application:

- MSW
- C&D
- Post Industrial Waste
- Composting Sites
- RDF Production

Working in line with other equipment, pre-shredding and wind sifting machines are commonly set up in plants to operate in conjunction with conveyors, screens and secondary shredding equipment.



Pre-shredding and wind sifting machines are commonly set up in plants to operate in conjunction with conveyors, screens and secondary shredding equipment.

### The Key to Efficiency

Shredding and proper separation of materials is the key to efficiency and reliability in modern waste treatment processes—and to the profitability of companies in the waste processing industry. | **WA**

*Hartmut Bendfeldt is Owner and President of eFACTOR3, LLC (Charlotte, NC), a company that brings together a keen understanding of environmental, engineering and equipment issues. Whatever you intend to recycle or turn into an alternative fuel, eFACTOR3 can provide a custom solution to meet your needs. They also provide systems integration and installation to ensure the success of clients. With a team of quality manufacturers, you'll get the best solution to meet the challenges of your unique environment. For more information, call (877) 801-3232, e-mail sales@efactor3.com or visit www.efactor3.com*

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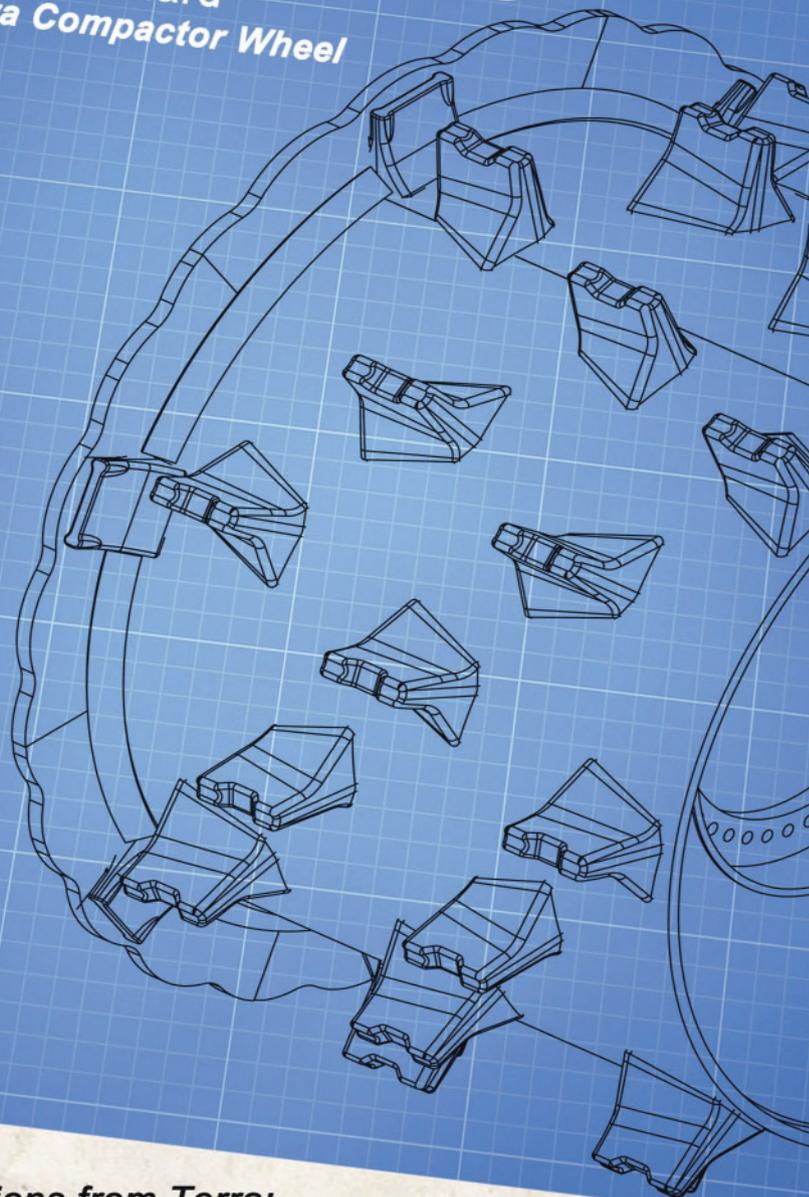
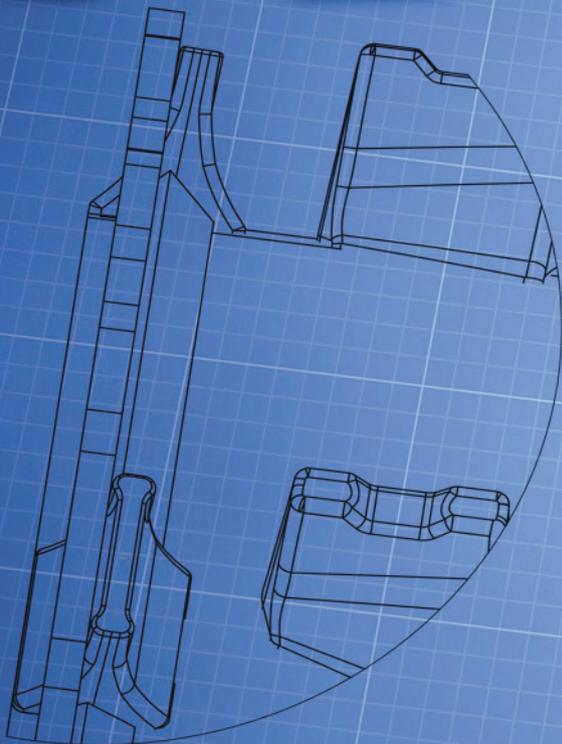


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# Cleat and Blade Rolling Wire Guard

From Terra Compactor Wheel



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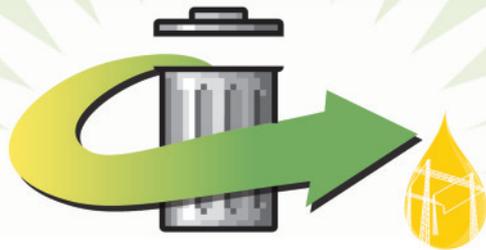
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**CLICK HERE FOR MORE INFORMATION!**

TANA-North America (Lubbock, TX) introduces the Tana Shark shredder which has a unique design, rugged characteristics, is easy to use, has flexibility in sizing finished material, and provides low maintenance and operating cost. It Uses a patented "swing plate" technology, which gives protection to the bearings by flexing just a bit. This small amount of flexing is all that's needed to minimize wear and drum issues. The unit uses Rexroth hydrostatic drive components and is available with Cummins diesel or electric power on wheels, tracks or as a stationary skid. The Tana shredder comes in two sizes and can cut and break most any waste flow from thin plastics to tires and railroad ties. Units are rated from 162,000 to 324,000 ft pounds of torque and are equipped with a side opening access door for easy access and a screen to help size the finished product. The "smart" control system has preset programs that maximize the capability of the machine. These programs identify what type of waste is being processed and what to expect as far as bridging and clogging. The shredder automatically reverses to clear itself and also senses when it's loaded and when it's empty so it can automatically reduce the engine output and fuel consumption. It will turn itself off if unused for over 15 minutes to conserve fuel use.

The unit comes equipped with "PROTRACK". This is a monitoring system that enables the owner to monitor the unit's operating characteristics remotely. It also sends service alerts and notifications about maintenance requirements to specific e-mails. One option is a discharge scale and also available are reports and production analysis for the owner who can see from any Internet access (including cell phone) the real-time production rate and operating characteristics of the machine. The unit has a crossover band magnet on the rear discharge conveyor to remove metal and wire from the finished material and is equipped with a single discharge belt for evacuating material quickly and easily. The single screen fits snugly under the rotating shaft on adjustable supports that can raise and lower the screen for final sizing of the finished product. Both knives and counter knives are heavy duty dual edged and are easily changed and replaced.

FOR MORE INFORMATION, CALL (888) 999-4909 OR VISIT [WWW.TANA-NA.COM](http://WWW.TANA-NA.COM) OR [WWW.HUMDINGEREQUIPMENT.COM](http://WWW.HUMDINGEREQUIPMENT.COM).



## Waste Conversion Technology Conference & Trade Show

*(Formerly the Waste-to-Fuels Conference & Trade Show)*

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VECOPLAN's (Archdale, NC) V-EBS is designed specifically for the production of refuse derived fuels (RDF) from MSW, C&D refuse, industrial scrap or virtually any other waste stream. The V-EBS has an infeed opening of 2510mm X 1400mm, a rotor dimension of 1000mm X 2510mm and has 54 cutting inserts on its rotor. It employs two counter knives for precise cutting of feedstock. Powered by Vecoplan's patented HiTorc®, electromagnetic drive, the shredding rotor turns at 150-250 rpms and features a throughput capacity of 10-22 t/h. The V-EBS is one of the machines often integrated into Vecoplan's complete WTE and RDF feedstock preparation systems.

FOR MORE INFORMATION, CALL (336) 861-6070 OR VISIT WWW.VECOPLAN.COM.



GEOTECH ENVIRONMENTAL EQUIPMENT, INC.'s (Denver, CO) GEM™ 5000 is designed specifically for use on landfills to monitor Landfill Gas (LFG) collection and control systems. The GEM 5000 samples and analyzes the methane, carbon dioxide and oxygen content of landfill gas with options for additional analysis. Features include:

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- Lighter and more compact
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The LJB EQUIPMENT SALES COMPANY'S (Lake Park, FL) BlokPak® 3000 Transfer System is an innovative product for high volume processing of municipal solid waste for transfer to the landfill. The powerful compaction force produces maximum payloads at an affordable price. The system compacts waste against a gate in a compaction chamber forming 8-10 foot long logs. The logs are then ejected into a transfer trailer. After the trailer is full, the waste can continue to be processed waste while changing trailers saving valuable time.

The BlokPak 3000 can be installed in existing over-the-top transfer station facilities. At these facilities, the compactor is fed with a front-end loader off of a tipping floor. It can also be configured for conveyor feed or direct dump applications. The refuse is fed into the large 100 L x 86 W x 91 H clear top (feed) opening. The packing ram compresses the waste into the compaction chamber against a vertical steel gate. The gate remains closed while the ram is cycling forming a dense log of refuse. When the desired log length has been reached, the vertical gate raises and the ram pushes the log into the transfer trailer. Once the trailer has reached maximum payload, the trailer is replaced with an empty trailer. The ram penetrates into the trailer 60" (5 ft.). This assures a clean break-a-way when the trailer is full. Since the gate is closed, the BlokPak 3000 can continue to cycle and process waste while the trailer is being replaced to ensure quick turnaround times.

**FOR MORE INFORMATION, CALL (561) 848-2646 OR VISIT WWW.LJBEQUIPMENT.COM.**

Residents in Orange County, FL will get to see their 38,000 acre Lake Apopka clean and usable again with the assistance of a Tuffman Stainless Steel Trommel Screen from WORLDWIDE RECYCLING EQUIPMENT SALES, LLC (Moberly, MO). This third largest lake in Florida was once one of the state's main attractions with its trophy-sized bass and 21 fish camps, but suffered major deterioration over the years due to pesticide spills and an attempt to circulate the water for irrigation that resulted in algal blooms and deprived the lake of oxygen and sunlight. All of this turned the once thriving natural habitat and recreational area into an avoided mucky mess.

That was until Dr. Dan Canfield, a lake management specialist from the University of Florida, stepped onto the scene with the Clean to Green dredging project that allows both the water and the muck to be reclaimed. The thick, soupy water is siphoned from the lake and sent through the Tuffman Stainless Steel Trommel Screen that spins and sifts it, separating the muck from the water. The result is two separate discharge streams from the trommel, one of clean water to be recycled back into the lake and one of odorless, loose dirt to be reused as potting or top soil.

The ability to reuse the muck this way also saves money, as the soil can be sold to help fund the project. Researchers predict that funds from the soil reclamation will pay for as much as half of the costs of cleaning up the lake.

**FOR MORE INFORMATION, CALL (660) 263-7575 OR VISIT WWW.WWREQUIP.COM.**

