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www.wasteadvantagemag.com November 2013 Vol.4, No.11

# WasteAdvantage magazine

The Advantage in the Waste and Recycling Industry



**EMPIRE DISPOSAL:**  
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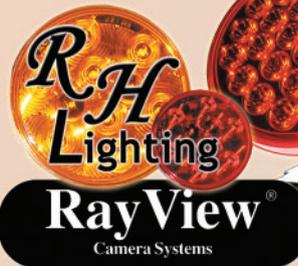
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## Editor's Note



AS WE ARE HEADED TOWARDS THE END OF ANOTHER GREAT YEAR HERE AT *Waste Advantage Magazine*, not only are we wrapping up our fourth year of publication, but we are also excited to introduce a brand new show that we have developed—The Fleet Management Expo. Debuting in Indianapolis, IN at the Indianapolis Marriott East from June 23 – 25, 2014, The Fleet Management Expo will focus on providing waste and recycling fleet managers and personnel with hands-on information through the opportunity to test new trucks and equipment. You can also visit with vendors that specialize in fleet maintenance, safety, government standards, etc., as well as hear topics on lowering your fleet costs, engines, shop safety, route optimization and more. We are looking forward to seeing everyone at this first annual Fleet Management Expo in Indianapolis. Turn to page 18 for more information about the show, registration and call-for-speakers information.

*Waste Advantage Magazine* is also happy to introduce our newest Editorial Advisory Board Member, Larry Wyluda. Currently the CEO of Newport Environmental Technologies, the Master Distributor for SuperNova's "green" technologies, he is responsible for all sales, branding and distribution in North America. Larry has spent 33 years in the commercial finance industry focused primarily in the transportation and environmental markets. His experience ranges from sales and marketing to operations with P&L responsibilities. He managed the Southern California Branch of Associates Commercial Corp. and grew their net receivable portfolio from \$250 million to nearly \$500 million in less than five years. The Branch, through a network of direct sales representatives, sourced volume from end users, dealers and OEMs. Subsequent to Associates, Larry opened an office for Financial Federal Credit to service the West Coast transportation and environmental industries. He also developed the West Coast markets for the Equipment Finance Group of ORIX out of Kennesaw, GA. Since 2004, Larry has owned and operated The Stephens Company (TSC) (Little Rock, AR). TSC provides a range of financial services to end-users nationally. Financial products include: equipment financing, project financing, M&A, lines of credit, private label financing and real estate financing. He also serves as the Executive Director in the U.S. for Clean Air for Kids™, a non-profit foundation established to aggregate emission reductions, or carbon credits, and convert these into funds which will be redirected to pre-qualified hospitals and children's programs.



Finally, be sure to sign up for the Green E Awards. These awards represent those in the waste and recycling industry who are making a commitment to using better chemicals, whether they are for cleaning, maintaining vehicle or otherwise. Turn to page 58 or go online to [www.wasteadvantagemag.com](http://www.wasteadvantagemag.com) to download a form. The last deadline is November 30, so be sure to send in an application if you haven't already, and let us know if you have any questions about it.

As always, feel free to contact me with any comments, suggestions or questions. We appreciate your input and look forward to hearing from you.

Best Regards,  
Angelina Ruiz  
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- Landfill Gas to Energy
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- Landfill Gas to Energy: Case Studies
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- Aluminum Waste: Model Practices and Research
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The Environmental Research & Education Foundation is a 501(c)3 class charity that funds and directs scientific research and educational initiatives for waste management practices to benefit industry participants and the communities they serve. For more complete information on EREF funded research, its scholarship program and how to donate to this great cause, visit [www.erefdn.org](http://www.erefdn.org).

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One of Empire Disposal's new Freightliner trucks.

Photo courtesy of Empire Disposal.  
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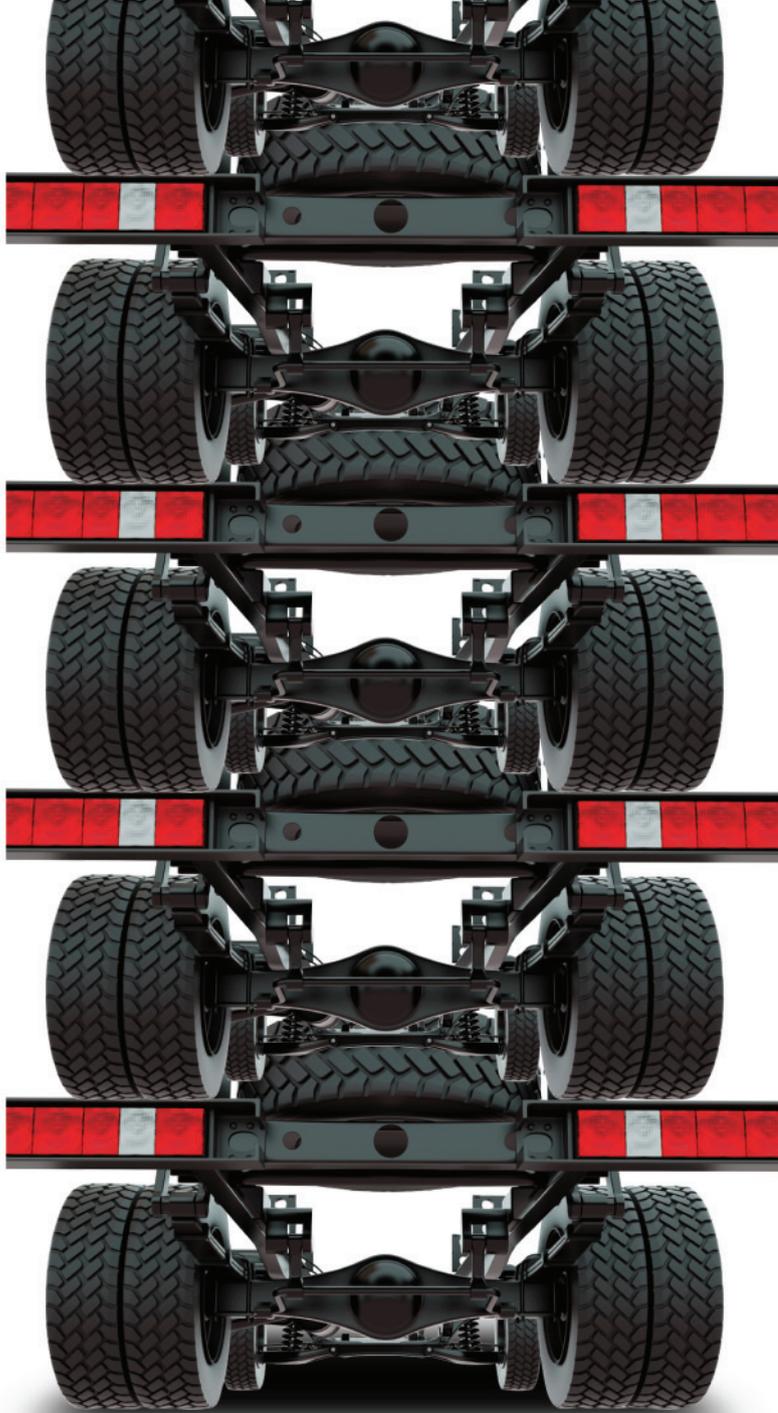
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# 59 ADVANTAGE MARKETPLACE

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## Air-Weigh Teams With Core Computing Services to Integrate BinMaxx's® Weight Data

**AIR-WEIGH** (Eugene, OR) has teamed with Core Computing Services to integrate bin weight data from its BinMaxx scale into Core's eMobile™ Android based touch screen tablet driver terminal. The newly incorporated data will allow fleet managers in the refuse industry to monitor bin weight information in real time. "The combination of Air-Weigh's BinMaxx on-board scales and Core Computing Services Operational and Financial back-office software is a natural fit," said Martin Ambros, president and CEO of Air-Weigh. "We are pleased to be working together to bring our advanced scale technology to the waste and recycling industry."

Nate Piersall, President of Core Computing Services, said "We are very excited to have a seamless and proven integration with the Air-Weigh system out in the field. This makes the driver's job easier, provides faster and more accurate scale data to the office system and accelerates the ROI for these two technologies. This is a win for everyone."

For more information, visit [www.air-weigh.com](http://www.air-weigh.com) or [www.cccorp.com](http://www.cccorp.com).

## Petersen Industries, Inc. Awarded 2nd NJPA Contract

**PETERSEN INDUSTRIES, INC.** (Lake Wales, FL) was awarded an NJPA (National Joint Powers Association) national contract #070313-PII for procurement of "Grounds Maintenance with Related Equipment, Accessories and Supplies". This is Petersen Industries second awarded contract with NJPA. As a NJPA awarded contract vendor, Petersen Industries is part of a select group of world-class vendors. "NJPA is the best and simplest way for government entities to get exactly what they want, while having total transparency and

meeting the bid requirements," says Sam Petersen, Vice President of Petersen Industries. Petersen Industries is pleased to offer this streamlined purchase process benefit to its customers.

For more information, visit [www.petersenind.com](http://www.petersenind.com) or [www.njpacoop.org](http://www.njpacoop.org).

## Eaton Highlights New Technology at Annual Distributor Meeting

During its recent annual Distributor Meeting, **EATON** (Cleveland, OH) highlighted technology that will improve productivity and safety for off-highway applications, like collection fleets. The event, held in mid-September, brought together distributors, original equipment manufacturers, end users and Eaton employees, offering the opportunity to network and learn about the latest product and technology offerings from Eaton. At this year's event, the company showcased its new line of Pro-FX controls and software, designed for off-road mobile vehicle applications.

Additionally, distributors, OEMs and end-users learned about the LifeSense® hydraulic hose condition monitoring system, which monitors the health of hydraulic hose assemblies in real time. Using either a wired or wireless system that detects internal fatigue or external damage, the system provides advanced notice as the hose approaches the end of its useful life, helping to reduce hose failure and subsequent equipment downtime. These topics and many more were covered in 60 workshops and in one-on-one conversations with experts at the Eaton Expo.

For more information visit [www.eaton.com/Eaton/ProductsServices/Hydraulics](http://www.eaton.com/Eaton/ProductsServices/Hydraulics).

## BENLEE Hires East Coast Sales Manager

**BENLEE** (Romulus, MI) has recently hired John Tobolski as the company's East Coast Sales Manager. Tobolski's primary responsibilities will include overseeing the Eastern seaboard from Virginia to Maine to help understand customer's needs and wants. His strength is in product development and design. BENLEE is looking at new ways to market and its product line, including its powerful, but lightweight 80,000lb roll-off trailer, the BridgeMaster, and its roll-off truck replacement trailer, the Super Mini. Tobolski will also contribute to all of BENLEE's marketing and corporate strategies. BENLEE's owner, Greg Brown, says "John's in-depth experience in the waste, scrap recycling and manufacturing industries will help us achieve new levels of sales, product development and service for years to come."

Looking forward to his long career with BENLEE, Tobolski stated, "I am extremely excited to join a high quality company like BENLEE. They are the industry standard when it comes to roll off trailers. I truly believe that in today's economic climate the Super Mini will change the roll-off hoist business and make the roll-off truck a thing of the past."

For more information, call (734) 722-8100 or visit [www.benlee.com](http://www.benlee.com).

## Environmental Solutions Group Expands Operations

**ENVIRONMENTAL SOLUTIONS GROUP** (ESG) (Chattanooga, TN) announces the opening of a new manufacturing facility in Phoenix, AZ. The company states the expansion is necessary to address a growing demand for its products in the western region of the U.S. The company says it will initially use the facility to manufacture their Marathon brand of compactors and balers used in solid waste and recycling applications, as well as anaerobic digestion systems produced in partnership with Zero Waste Energy. States company president, Pat Carroll, "Our new Phoenix plant is well positioned to help us meet the increased west coast demand for our products efficiently and cost-effectively. We are excited about the trust which customers place in our brands and about our expanded capacity for meeting their needs."

For more information, visit [www.doveresg.com](http://www.doveresg.com).



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# Mark Your Calendar



## NOVEMBER 2013

**18 – 20: Renewable Energy from Waste Conference**  
West Palm Beach Marriott  
West Palm Beach, FL  
www.rewconference.com

**18 – 21: 2013 North American NGV Conference & Expo**  
Georgia World Congress Center  
Atlanta, GA  
www.cleanvehicle.org/conference/2013/index.shtml

**19 – 20: 2013 RAM/SWANA Conference & Show**  
DoubleTree Hotel  
Bloomington, MN  
www.recycleminnesota.org

**20 – 21: Canadian Waste and Recycling Expo 2013**  
Palais de Congr s de Montr al  
Montreal, QC  
http://canadian-waste-recycling-expo-us.messefrankfurt.com

## DECEMBER 2013

**3 – 4: Waste Conversion Congress West Coast**  
Hilton San Diego Resort & Spa  
San Diego, CA  
www.renewable-waste.com/waste-conversion-west/index.php

## JANUARY 2014

**21 – 23: 17th Annual LMOP Conference and Project Expo**  
Hilton Baltimore  
Baltimore, MD  
www.epa.gov/lmop/workshops/17th.html

**21 – 23: World LNG Fuels 2014**  
George R. Brown Convention Center  
Houston, TX  
www.worldlngfuels.com

**25 – February 1: SeminarFest 2014**  
Rio All Suite Hotel and Casino  
Las Vegas, NV  
www.asse.org/education/seminarfest13

**26 – 29: 22nd Annual U.S. Composting Council Conference & Tradeshow**  
Oakland Marriott City Center  
Oakland, CA  
www.compostingcouncil.org/conference

## FEBRUARY 2014

**27 – 28: Mia Green Expo and Conference**  
Miami Beach Convention Center  
Miami Beach, FL  
www.miagreen.com

## MARCH 2014

**2 – 6: WM Symposia**  
Phoenix Convention Center  
Phoenix, AZ  
www.wmsym.org

**5 – 7: The Work Truck Show**  
Indiana Convention Center  
Indianapolis, IN  
www.ntea.com

**9 – 12: Southeast Recycling Conference & Trade Show**  
Hilton San Destin Golf Resort & Spa  
Destin, FL  
www.southeastrecyclingtradeshow.com



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## Government Gossip



### EIA and EREF Launch First Major Safety Manual Update in a Decade

The Environmental Industry Associations (EIA) and the Environmental Research and Education Foundation (EREF) have partnered to release the 2013 revised *Manual of Recommended Safety Practices* for the waste and recycling industry. This is the third edition of the safety reference guide, updated by a team of respected industry safety professionals for the first time in more than a decade to include a greater emphasis on recycling than previous editions. The manual will help safety practitioners and operations managers handle the most significant safety challenges facing waste and recycling service companies and will serve as a resource for all levels of waste and recycling personnel, including managers and supervisors, drivers and crew, equipment operators, process line workers and maintenance personnel.

Of the updated manual's release, EIA's director of safety Phil Hagan stated, "I am excited that EIA is able to offer this great safety resource to the industry. Members and non-members alike are continually working to enhance their safety efforts, and this manual is an ideal source of safety information and related program elements."

EREF President and Chief Executive Officer Bryan Staley added, "By using the information provided by EIA and EREF in this safety manual, the industry will continue to make significant improvements toward creating a safer working environment for all who are a part of the waste industry."

For more information or to order copies, visit [www.environmentalisteveryday.org/safety-manual](http://www.environmentalisteveryday.org/safety-manual).

### California Governor Signs Mattress Recycling Bill, Third in the Country

California Governor Jerry Brown signed into law a producer responsibility bill for post-consumer mattresses that calls for manufacturers to create and manage a mattress recycling program. The signing of SB 254 makes California the third state in the nation to address the end-of-life management of mattresses through product stewardship policy. Under the provisions of the law, mattress manufacturers are required to create and manage a single mattress recycling organization that will provide recycling services to municipalities free of charge.

The program will be financed by a visible state mattress recycling charge, or "eco-fee," which will be collected from consumers at point-of-sale. The mattress recycling organization must submit a plan detailing the operations of the program to the Department of Resources Recycling and Recovery (CalRecycle) on or before July 1, 2015. Similar to laws passed in Connecticut and Rhode Island earlier this year, the stewardship organization will be required to establish performance goals for the first two years of the program, and to report on program results. After the first two years, the mattress recycling organization will provide updated performance goals to CalRecycle on an annual basis. Only manufacturers who participate in the program will be permitted to sell mattresses in the state. The law also requires the mattress stewardship council to reimburse costs for administration and oversight to CalRecycle. CalRecycle may promulgate emergency regulations necessary for implementation.

For more information, [www.calrecycle.ca.gov](http://www.calrecycle.ca.gov).

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### OSHA Launches New Safety and Health Certificate Program for Public Sector Employees

OSHA launched Public Sector Safety and Health Fundamentals, a new certificate program that provides public sector employees with training on occupational safety and health to reduce injuries, illnesses and fatalities among workers in state and local governments. The certificate programs are available in construction and general industry. Students can choose from a variety of courses, including occupational safety and health standards for construction or general industry, safety and health management, accident investigation, fall hazard awareness and recordkeeping. To earn a certificate, participants must complete a minimum of seven courses, consisting of three required courses and additional elective courses, totaling at least 68 hours of in-class training.

OSHA has created a new Web page dedicated to this certificate program. The page provides course descriptions and prerequisites, program information and instructions on how to apply to the program. The certificate program is administered by OSHA Training Institute Education Centers, which are non-profit organizations authorized by OSHA to deliver occupational safety and health training. All courses required to complete the program are available at OTI Education Centers nationwide. Courses taken at different OTI Education Centers are transferrable and can count toward the certificate program.

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to ensure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance.

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# Empire Disposal: Hauling Born of Necessity

Having grown out of a roofing company over 10 years ago, EMPIRE DISPOSAL HAS ESTABLISHED ITSELF AS ONE OF THE LEADING CONSTRUCTION WASTE HAULERS in the Dallas/Fort Worth Metroplex.

**SANDRA AND RONNIE MCGLOTHLIN DIDN'T** exactly plan to get into the waste hauling business. It just became a natural extension of a very successful roofing business. After getting their start in the family roofing business, Sandra and Ronnie decided that they wanted to do things their own way and opened Empire Roofing in 1982. Starting with a group of eight employees working closely together, teamwork was key in the company from the very beginning, with each person contributing to each project. Building upon the customer-focused principles used by the nation's successful retailers, Empire Roofing completed job after job on time and on budget. Empire Roofing owes its growth to hard work and word-of-mouth promotion. As satisfied commercial and industrial customers spread the word, the business grew along with its reputation for quality. Since that time, the

McGlothlin's have grown their business from eight employees and \$137,000 in sales to more than 500 employees with \$100 million in sales by serving industrial and commercial customers roofing needs. Empire has five locations in Texas including Dallas/Fort Worth, San Antonio, Houston, Austin, El Paso with additional locations in Tennessee, Florida and Mexico.

The Empire Roofing credo is: combine the finest products with the highest level of customer service, and do everything right the first time. "The quality of our work is superior as a result of our employee's commitment to the company and to Sandra and me as owners. While a co-owner does a final inspection of every job site, we rely daily on each Empire Roofing employee to make the right decisions for our customers. We place great importance on professionalism and emphasize

One of Empire's new Freightliner trucks working.



Photo courtesy of Wastequip.

quality as well as safety in all our operations,” says Ronnie McGlothlin who co-founded Empire Roofing in 1982 with Sandra McGlothlin. With both of the McGlothlin’s children active in the business on a full-time basis, Empire is a multi-generational company that intends to provide exceptional service for many years.

### From Roofing to Hauling

With the tremendous success they experienced, Sandra McGlothlin, President of Empire Disposal and Secretary/Treasurer for Empire Roofing, quickly found that most waste haulers could not adequately service jobsites like theirs that generated such large volumes of construction debris. Empire’s commercial roofing jobs would often require a dedicated truck for as much as a month at a time to handle the volume of particularly large jobs. So they did what any good entrepreneur would do and launched a business to address an unmet need. Empire hired drivers and purchased its own trucks and roll-off containers to handle construction debris cleanup.

As a result, Empire Disposal was started 11 years ago in the Dallas/Fort Worth Metroplex to handle their own construction debris removal needs as well as those of other roofing contractors that had asked them to handle waste hauling. Today, M.W.B.E. and H.U.B. certified, Empire Disposal specializes in commercial and industrial waste removal for their own construction jobs as well as hauling jobs for other roofing contractors and general contractors that require service. Large haulers can perform waste hauling more competitively but they cannot offer the level of service that Empire Disposal can offer including the highest quality and personalized service, instant dispatching for



Sandra and Ronnie McGlothlin.  
Photo courtesy of Wastequip.

same day service, and after hour service or 24-hour service for fire, water or storm damage. Despite the sensitive nature of doing business with competitors, Sandra is quick to point out that “Empire has been able to establish an ethical and moral separation of roofing and disposal. We get jobs based on our ability to service customers. It’s not just about who submits the lowest bid.” Empire

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## CHARITIES AND AWARDS

### Charities

Boys & Girls Club  
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Fort Worth Parade of Lights  
Habitat for Humanity  
Historic Handley Street Festival  
Latin Fest  
Mainstreet Art Festival  
The Marshall Family Extreme  
Makeover: Home Edition  
Music Arte de Fort Worth  
Women's Center

### Awards

2006: *Golden Hammer Award*  
Presented by KPost Company In  
Recognition of Empire Disposal's  
Participation in the Outstanding  
Commercial Roofing Project - The  
Recoating of Texas Stadium

2004: *A Rising Star Small  
Business of the Year*  
Presented by Fort Worth Chamber  
of Commerce In Recognition of  
Empire Disposal's Outstanding  
Small business Practices

2004: *Clear Channel Outdoor  
Excellence in Business Award*  
Presented by Clear Channel  
Outdoor In Recognition of Empire  
Disposal's Achievements &  
Success

Disposal is also sure to take care of their recycling material at job sites, setting out several dumpsters for wood, metal, paper and taking the recyclables to the appropriate local recycling facilities.

## Challenges

Like many successful entrepreneurs, Sandra and Ronnie do not have formal business training. "We learned a great deal through working in the family business and through subcontracting work prior to starting Empire Roofing. We watched how others ran their businesses and ultimately learned a lot by just doing it," Sandra admits. Fortunately, when the economy hit a hard time, Empire Disposal was not much affected by the changes. Although, the slow economy did affect the new construction and anything Empire Disposal did for general contractors, the company managed to keep a steady workload, even getting busier with rehab work. "We especially focus on maintaining our relationships with the roofing contractors in this area and as a result, we do a lot of their trash with re-roofing jobs, so we stay real busy with that type of a contractor," says Sandra.

However, that does not mean that Empire Disposal is free of challenges. The big one they constantly face is to get quality CDL drivers. Sandra points out that even through you can get drivers; sometimes they are just not as conscientious about their driving, safety and taking care of Empire's equipment. "We have a supervisor that sits with new

drivers for a long period of time and does some training. You can tell pretty quickly whether or not these new drivers are going to do things the Empire way, such as keeping within the speed limit. We have tracking systems on our trucks so we know how fast they are going." Other things we look at are their commitment to the job and if they like being at our company. We want them to be happy with their place of employment," says Sandra.

Another challenge includes complying with the changing regulations on a continual basis. As a result of more government agencies and bureaucracy, it takes time to get everything right. However, Empire works closely with their insurance company, follows the trade magazines and Web sites, and leans on vendors to help keep them informed of what is required in the industry.

## Keys to Success

According to Sandra, one of the keys to success is working with knowledgeable people that can provide guidance in areas like finance and legal matters.

Additionally, hiring the right people and treating them well is also important. "We're here for the relationships and for the long-term," Sandra said. This includes giving a Rolex to every 10-year employee. So far, she estimates, they have given out about 80 watches throughout the whole company. One person in particular she wants to recognize is Wayne Wooten. "He has been with Empire Disposal for 11 years, starting as a driver and now he does all the sales and manages the drivers. People like Wayne really take care of our businesses; we could not do it without him.

Learning from the pros such as having a knowledgeable equipment manufacturers' sale representative or dealer can really help. For example, Empire Disposal uses Galbreath Hoists and Freightliner Trucks. "We look for vendors that provide the best products and services. When we need something repaired it has to be done quickly because we cannot afford to be down for long. To have a relationship like that with vendors that provide quality product and quality service is huge. We don't take it lightly," said Sandra. "In addition, we hire people that have true knowledge, that are educated, and who have done things in the industry that I haven't—they help me run these businesses."

One of these great resources that Empire Disposal uses on a frequent basis is using a third-party company to do in-house training. "We have used ESC to handle safety training for the last 10 plus years. They check our sites, they follow our drivers, they give weekly training, keep up with employee and equipment certification and make sure we sure we are always in compliance. ESC is really important to us because they bring this safety and training to our company, therefore, giving everyone access to the information. They are always available. They show up and do training. Our guys have come to trust ESC; they reach out to them when they run into problems on or off the jobsite. ESC goes to the job sites as needed, talk to the clients if needed, we've found that our clients appreciate that even more," says Sandra.

Another key to a successful business, according to Sandra, is to become actively involved in industry associations. Sandra has been the president of several state and local organizations including serving as the only female chairperson of the Fort Worth Hispanic Chamber of Commerce. Through this and other organizations, Sandra has established a number of relationships that have proved critical to the success of their business. "We do a lot for the community. Currently, we are hauling trash and debris for a new facility of Lena Pope Home. They provide prevention, early intervention, counseling and education services to meet the behavioral health needs of children and families. Republic Landfill is providing the landfill charges for this project—which will be approximately 60 loads. We are proud of our relationship with our vendors, they are always eager to partner with us on these types of projects. We also set out bins for any event or organization that focuses on women or children, churches, private schools, etc. We'll do whatever we can to help our community."

Empire Disposal has even participated in an episode of Extreme Home Makeover in January 2006, working with a crew from start to finish completing the Marshall Family home in one week. "It was fast and furious, just like you see on the show. People are working 24/7; there is a lot of planning involved. We had one of our employees there the whole time helping where he could, moving the dumpster where needed, dumping when need, etc. It was a very neat project and well worth it. For all of those involved, I think it made a difference in their life. It was a great experience for me and for my company," says Sandra.

## Looking Ahead

As Sandra looks towards Empire Disposal's future, she is happy with where



Left: Demo of the old Marshall house on Extreme Makeover: Home Edition.  
 Top: New Marshall house in one week. Photos courtesy of Empire Disposal.

things stand now and she plans on doing exactly what the company has done for the past 30 years—maintains quality customer service and performs quality work. With regards to the company's growth, she stresses that it depends on how the economy goes and how busy they get. "We are always updating our equipment and making sure that we have some of the best out there. However, if we get busier we will absolutely think about adding more equipment. At

this point, between Empire Roofing and Empire Disposal we are close to 500 employees so 500 families depend on Empire to keep on selling quality service and doing quality work." | **WA**

*For more information, contact Sandra McGlothlin, Empire Roofing and Empire Disposal at (817) 572-2250 or via e-mail at [sandra@empireroofing.com](mailto:sandra@empireroofing.com) or [sandra@empiredisposal.com](mailto:sandra@empiredisposal.com)*

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# Tire Pressure Maintenance 101: What You Need to Know (and Why)

Brian Buckham and Jose Martinez

**By tracking tire data and following prescribed air pressure maintenance practices, YOU CAN OPTIMIZE YOUR TRUCK TIRE INVESTMENT.**

**ARE YOU LOOKING FOR A SURE-FIRE WAY TO** optimize the return on your commercial truck tire investment? Start with tire inflation. Quite simply, maintaining correct inflation pressure is the single most important tire care practice that you can employ. Consistent, correct inflation positively impacts tire wear, casing life and your tire's overall performance. It can help reduce the amount of fuel your truck uses, and even contribute to a more comfortable ride.

## **Over-Inflation and Under-Inflation**

The benefits of checking—and if needed, adjusting—your tires' air pressure levels more than make up for the time and effort that this practice requires. Both over-

inflation and under-inflation change a tire's footprint. You'll want to keep an eye open for both conditions.

Over-inflation can result in a number of issues ranging from a harsher ride to irregular/fast treadwear, and should be avoided. (Irregular wear can be corrected if detected early enough, but can be avoided through proper inflation.)

Under-inflation can also create a number of serious problems that can cost you time and money. Under-inflation causes tires to flex more as they roll down the highway, and generate excessive heat. These things cause tire component integrity to deteriorate if left unchecked. Under-inflation can also lead to separations, irregular/uneven wear and increased potential for road hazard damage. In addition, under-inflation hurts a

Regular tire inflation is the single most effective maintenance practice that waste haul fleets can employ.





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truck's fuel economy, due to the simple fact that under-inflated tires force a vehicle's engine to work harder.

### Factors that Affect the Correct Tire Pressure

At this point, you might be asking, "What's normal when it comes to tire pressure?" Tires are engineered to run at specific pressure levels based on the load they're carrying. To determine the correct inflation level for your tires, gather information about your axle loads and refer to load charts like the kind in **Figure 1, page 20**. (For example: For a size 315/80R22.5 Goodyear G289 WHA tire, Load Range L: single tire = 10,200 lbs. at 130 psi; dual tires = 9,090 lbs. at 130 psi.)

Truck operating speed also plays a role in the setting of optimal tire pressure. The tire industry has guidelines for allowing increased maximum loads if vehicle speeds are reduced. Think of large cranes that need to carry heavy loads but move slowly.

Another thing to keep in mind at this time of the year is that ambient temperature has an effect on inflation levels. Inflation pressure drops approximately 1 to 2 pounds for every 10-degree decrease in ambient temperature. Drivers should also check inflation pressures at least once a week, using a calibrated tire gauge or a gauge that is checked periodically, according to tire industry recommendations. Again, inflation checks take time and manpower, but the benefits are worth the investment.

Maintaining a record of tire inflation—plus tire inflation checks and adjustments—can prove beneficial, as well. Truck tires often represent a significant capital outlay, and like any investment, should yield a profitable return. Frequent air pressure checks and adjustments will help you achieve this.



A tire technician checks the inflation pressure of a G289 WHA DuraSeal, a Goodyear truck tire that has been designed for waste haul applications.

## LOAD RATINGS AND INFLATION DATA FOR RADIAL TRUCK TIRES

| Tubeless              | Tube Type  | Load Range |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Dual Tire Load Rating |            | D          | E          | F          | G          | H          | J          | L          |
| 7.50R16LT             |            | 2140@65    | 2440@80    |            |            |            |            |            |
| LT225/75R16           |            | 2150@65    | 2470@80    |            |            |            |            |            |
| LT245/75R16           |            | 2381@65    | 2778@80    |            |            |            |            |            |
| LT215/85R16           |            | 2150@65    | 2470@80    |            |            |            |            |            |
| LT235/85R16           |            | 2381@65    | 2778@80    |            | 3415@110   |            |            |            |
| 8.75R16.5LT           |            | 2070@65    | 2360@80    |            |            |            |            |            |
| 9.50R16.5LT           |            | 2445@65    | 2790@80    |            |            |            |            |            |
| 8R17.5                |            |            | 2755@85    |            |            |            |            |            |
| 8.5R17.5              |            |            |            | 3085@90    |            |            |            |            |
| 9R17.5HC              | 8.25R15    |            |            |            | 3660@105   | 3970@110   | 5675@125*  |            |
| 10R17.5               |            |            |            |            |            | 4410@110   |            |            |
| 11R17.5HC             | 10.00R15TR |            |            |            | 4430@95    | 4850@110   | 6395@125   |            |
| 8R19.5                |            | 2700@80    |            | 3375@110   |            |            |            |            |
| 9R22.5                | 8.25R20    |            |            | 3950@95    |            |            |            |            |
| 10R22.5               | 9.00R20    |            |            | 4875@100   | 5250@115   |            |            |            |
| 11R22.5               | 10.00R20   |            |            |            | 5750@105   | 5800@110   |            |            |
| 12R22.5               | 11.00R20   |            |            |            | 5780@95    | 6750@120   |            |            |
| 13R22.5               |            |            |            |            |            |            | 7160@125   |            |
|                       | 12.00R20   |            |            |            |            |            | 7200@110   |            |
|                       | 14.00R20   |            |            |            |            |            |            | 9610@105*  |
| 11R24.5               | 10.00R22   |            |            |            | 6000@105   | 6170@110   |            |            |
| 12R24.5               | 11.00R22   |            |            |            |            | 6720@110   |            |            |
|                       | 11.00R24   |            |            |            |            | 7130@110   |            |            |
|                       | 12.00R24   |            |            |            |            |            | 8100@110   |            |
| 215/75R17.5           |            |            |            |            |            | 4540@125*  |            |            |
| 225/70R19.5           |            |            |            | 3415@95    |            |            |            |            |
| 245/70R19.5           |            |            |            | 3875@85    | 4375@100   |            |            |            |
| 265/70R19.5           |            |            |            |            | 4750@105   |            |            |            |
| 255/70R22.5           |            |            |            |            |            | 5070@115   |            |            |
| 245/75R22.5           |            |            |            |            | 4410@110   |            |            |            |
| 265/75R22.5           |            |            |            |            | 4805@100   |            |            |            |
| 295/75R22.5           |            |            |            |            | 5675@100   | 6005@110   |            |            |
| 295/80R22.5           |            |            |            |            |            | 6610@115   |            |            |
| 315/80R22.5           |            |            |            |            |            |            | 7610@120   | 7750@120*  |
|                       | 13/80R20   |            |            |            |            |            | 7160@110   |            |
| 285/75R24.5           |            |            |            |            | 5675@100   |            |            |            |

Figure 1: Example of a load chart.

### Using Data to Optimize Your Truck Tire ROI

Truck tires can represent a substantial capital investment. Careful, systematic documentation of tire maintenance and performance can help you optimize your truck tire returns. There’s nothing wrong with tracking tire installations, removals and associated costs using paper and pencil. But as the number of trucks in a fleet increases, keeping records “the old-fashioned way” becomes more complex. Fleets at that point become excellent candidates for an online tire management tool—particularly one that can tap into tons of tire data.

Effective online tire management tools don’t just track tire purchases and installations. They should also have the ability to track reasons for tire removals. Knowing why tires were removed, plus of the age of tire casings and the number of retreads these casings are yielding, can indicate if your tires were properly maintained.

Furthermore, knowing the wear rates of the tires in your fleet allows you to anticipate peaks and valleys in the replacement tire purchase cycle, which can help with budget planning. Tire management software also will help you evaluate tire performance on different sets and types of vehicles to help you make better decisions.

In addition, tire performance between different company locations or terminals can be tracked the same way. This helps fleets pinpoint problem areas and establish best practices based on tire performance in one or more locations. Information is power, and to stay ahead of the competition, you must make the data work for you. Tires should be viewed as part of a holistic system—a “total package solution.” Tire quality is just one piece of the puzzle. You also need to capitalize on the information—and information tools—that are at your disposal. Tracking tire data is imperative. By tracking tire data and following prescribed air pressure maintenance practices, you can optimize your truck tire investment. | **WA**

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## RFID

# Improve Operational Efficiency, Accountability and Effectiveness with RFID Solutions

Richard Aufreiter

**TODAY'S RFID SYSTEMS PROVIDE THE TOOLS FOR MEETING DEMANDING CHALLENGES, while enabling operators to reduce fleet costs and provide a more comprehensive service to their customers.**

### WASTE MANAGEMENT SERVICE COMPANIES FACE

a number of challenges in an era of increased expectations related to efficiency and accountability, and the advent of demanding sustainability and other “green” initiatives. Challenges include reducing unproductive trips, increasing route and fleet efficiencies, and potentially supporting the data-tracking needs of incentive-based customer recycling programs. In many cases, underperforming trucks must be redeployed to areas or routes that are more heavily burdened. Additionally, municipalities increasingly want greater accountability from their providers for services rendered, and a quick resolution when there is bin loss or damage. Meanwhile, in the commercial and industrial sectors, it is increasingly essential to manage and know the locations of all high-value assets and containers.

RFID technology provides a reliable and durable solution for meeting these challenges. In the past, tracking waste was a slow, costly and labor-intensive process. Modern RFID technology has played a game-changing role in the industry by bringing about a major shift in how waste management companies operate, whether it's managing weighbridges, optimizing fleet efficiency, or analyzing individual customer profit and loss. In order to realize RFID technology's benefits, though, it is necessary to build the right

system for the application—one that provides the optimal combination of reliability, functionality and performance, and is backed by all necessary product warranties, technical support and customer service.

### RFID System Benefits

Most consumers and businesses don't think about what happens to waste after they dispose of it, but those responsible for waste handling have a huge stake in knowing and managing information about what they collect, how much they collect, where it originates and where it goes.

RFID tags attached to waste containers deliver this critical information by supporting the identification and traceability of waste streams. In a typical home or business, the unique ID number of a tag is associated with a bin and that bin's owner or address. During the process of recognizing, lifting and registering bins, the tag is read and the information is time-coded and logged. In applications such as medical waste, the receptacle itself is collected, transported to a disposal point and returned to its place of origin. In such applications, a read/write tag may actually collect, as well as disseminate, information.

The goal of an RFID solution is to simplify operator tasks, provide increased transparency of operations

Considerations in high-volume commercial and industrial sectors include the need to know truck weights, pickup times and locations. Operators also need to know how often containers are put out and how much is in them. RFID technology supplies this data.

Photos courtesy of HID Global.



## Improve Operational Efficiency, Accountability and Effectiveness with RFID Solutions



Top: In a typical home or business application, uniquely numbered RFID tags are associated with a bin and that bin's owner or address.

Right: During the process of recognizing, lifting and registering bins, RFID tags are read and the information time-coded and logged.



and maximize returns on an operator's investment. RFID systems enable operators to monitor sorting quality, and to track the weight of each container's content and how often a container is set out for collection. These systems also simplify billing for service, and support the implementation of incentive-based invoicing for recycling and other programs.

Variation in weight of waste from one unit or dwelling to another is one of several principle drivers for the use of RFID solutions. Waste can vary from 1,100 to 4,400 pounds per year from one house to the next. RFID technology encourages recycling as it enables a system to manage charges based on usage, rather than applying a flat charge for every customer. In the U.S., a bonus is sometimes paid for recycling, and this practice is growing in popularity around the world, creating the need for reliable data tracking.

Considerations in the high-volume commercial and industrial sectors are slightly different. For example, if a truck collects roughly 140 containers a day, it is critical that management knows the truck's weight, pickup times and location. Operators also need to know how often containers are put out, and how much is in them. RFID technology supplies this data, which can be analyzed at regular intervals to suit management reporting schedules.

In the building industry, very large and expensive roll-on/roll-off containers must be managed and tracked efficiently. In order to optimize efficiency, management needs to know the location of these assets at all times, and must be able to track what containers are on what truck, and what containers are with which customer. Everything requires careful management, from skip hire, through roll-on/roll-off to commercial rounds, and on to gate receipts

and material sales. RFID technology gathers and relays information about asset location to the back office, enabling decisions to be made regarding route efficiency and optimization. Management also has ready access to information about the weight usage of every customer and profit margins.

Additionally, organizations can use RFID information for credit control—if a customer hasn't paid their bill, the waste management company can use RFID to stop the bin from being lifted.

Implementing an RFID system can also have a positive impact on customer service. Some users have seen call center queries drop by as much as 80 percent as a result of having vital waste collection data immediately available to their staff.

### Building a System

The selection of tags and readers can have a huge impact on the success of a waste management initiative. Products must be designed specifically for the task, providing unique identification of bins. Tag reliability is also essential, and there can be no duplication of user ID numbers. System components also must be backed by warranties and support, and there must be the ability to choose from a comprehensive range of solutions.

Tags are available today for a broad range of operations including residential and commercial bins, medical waste containers, skips, bottle banks and more. Operators can select from standard off-the-shelf bin tags and custom-designed options, such as push-in bin tags for steel containers and OEM reader modules. The latter provide a high level of read range and performance, and a wider variety of tag options. For instance, in some applications, it may be necessary

to embed the tag into the wheelie bin, so that a reader on the truck can take the weight on the way up and down as well as the GPS coordinates. All information is relayed to the back office, providing valuable intelligence for decision-making on route efficiency and fleet optimization, and for recording exceptions such as "missed bin," "access blocked" and "bin contaminated."

For older bins in the field, plug tags can be easily installed. This is particularly important for service providers with large investments in existing bins. Screw-in bin tags are also popular, because of their superior durability. Waste bins come in many shapes, materials and sizes, but whether they are large or small, metal or plastic, or residential or commercial, they are all subject to harsh environments and rough handling. They may face heat, cold, rain, snow and ice, as well as harsh chemicals, inside or out. In some applications, the rigors of power-washing are an issue, and yet tags are expected to last a decade or more. Even in ordinary use, they are tossed, turned and dropped, either by humans or machines. With screw-in tags, chips are bonded to the antenna, and then the device is encapsulated in resin to provide maximum tensile strength and superior resistance to weather, shock and humidity. The tag is designed for installation as a step in the bin manufacturing process.

Another important tag option is tag size. For instance, epoxy tags are available in 20 mm sizes for curbside bins and 30mm sizes for bin producers that need to embed the tag during manufacturing. Versions should be available to meet low frequency (125 kHz), high frequency (13.56 MHz) and ultra-high frequency (869-956 MHz). Waste management related standards include HDX, FDX-b BDE, EN 14803, DIN 30745 and ISO 11785. To complete the solution, reader boards must meet established standards and performance requirements. It also should be possible to incorporate readers into hand-held or vehicle-mounted devices, and to be connected to a variety of controller- and host-based systems.

## Meeting Today's Demanding Challenges

Given the sophistication of RFID technology, it is also important to have a long-term relationship with the RFID solutions provider. The provider should offer a broad portfolio of standards-compliant tags and readers, and should have a strong reputation for engineering design-in expertise, a proven track record extending across millions of deployed tags, and the ability to offer the full range of product warranties and comprehensive service and support.

The demands of waste management will continue to grow, as "green" and other sustainability initiatives demand closer tracking of recycling streams. Operators also need to maximize efficiency and accountability, protect valuable assets, and potentially support incentive-based recycling programs that encourage waste reduction. Additionally, changes in waste handling technology or the special needs of certain applications may require the ability to track different types of materials in different ways, not just at pickup, but through the entire waste management process. Today's RFID systems provide the tools for meeting these and other demanding challenges, while enabling operators to reduce fleet costs and provide a more comprehensive service to their customers. | **WA**

*Richard Aufreiter is Director of Product Marketing, Identification Technologies with HID Global (Irvine, CA). He is responsible for the product management of the industry's most diverse and flexible line of contactless transponder products and radio frequency identification tags in low frequency, high frequency and ultra-high frequency used for animal identification and industry and logistics applications, as well as cards and inlays for NFC and non-NFC use. He can be reached at (949) 732-2000 or (800) 237-7769, or e-mail insidesales@bidglobal.com.*



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# Lighter Aluminum Wheels Outweigh Steel

Brian Thomas

**FORGED ALUMINUM WHEELS PRESENT LIFETIME ADVANTAGES OVER STEEL WHEELS. Although steel wheels are less expensive at the time of purchase, they become more high maintenance over time.**

## **SPEC'ING LIGHTER WEIGHT FORGED ALUMINUM**

wheels is a simple solution to increasing the overall fuel efficiency and oftentimes more importantly, improving the freight carrying capacity, of a vehicle. Refuse collection and other similar heavy haul applications demand a tough wheel. Also, as gas and diesel prices remain high and freight efficiency becomes more critical, the urgency for refuse equipment to find solutions that contribute to fuel economy, reduce maintenance costs and increase productivity, becomes greater than ever. Not only lighter in weight than steel, but forged aluminum wheels are also stronger and more durable to increase freight capacity and improve maintenance savings for improved productivity and, ultimately, lower lifetime operating costs.

## **Sustainability**

There are many sustainability benefits when spec'ing lighter weight forged aluminum wheels including supporting The SmartWay Transport Partnership, which helps companies improve fuel efficiency, increase environmental performance and increase supply chain sustainability. The EPA has determined that certain wide base tire models can reduce NOx emissions and fuel use by 3 percent or more, relative to the best selling new tires for line haul trucks, when used on all five axles on long haul Class 8 trucks. Low rolling resistance tires can be used with lower-weight aluminum wheels to further improve fuel savings.

More importantly, these environmental benefits are also cost effective. Since you can't have a tire without a wheel, pairing any SmartWay certified tire with a lightweight forged aluminum wheel achieves maximum benefits.

## **Fuel Efficiency and Weight Savings**

Refuse equipment managers should consider overall lifetime operating costs when spec'ing wheels on new equipment since forged aluminum wheels can improve quick and continuous "payback" in fuel savings or freight productivity combined with maintenance savings. For added fuel savings to refuse equipment, wheel manufacturers offer innovative technology, which assists in increased weight loss. For example, forged aluminum wheels significantly reduce wheel weight versus a comparable steel. It's no secret that the lighter the truck, the more cargo it can legally carry. Converting 18 22.5" wheels from steel to forged aluminum wheels can save more than 600 pounds. The upgrade takes advantage of this significant weight reduction to further improve fuel efficiency. Forged aluminum wheels' strength, durability and low weight deliver environmental advantages to complement their financial benefits. With larger payloads due to the weight savings, trips are reduced, and, since forged aluminum wheels are infinitely recyclable, they'll never see a landfill.

## **Enhanced Image**

Aluminum wheels do not require the continuous refurbishing for which steel wheels do such as removing rust, re-painting, touch up or other labor intensive steps. In addition, aluminum wheels are not painted like steel wheels, ultimately eliminating the need for spray paint and touch up. In harsh environments, equipment managers are required to dismount tires, paint or touch up and remount tires every year in order to avoid that common rusty appearance found on so



Upper Left: Dura-Bright wheels don't need to be polished and offer low maintenance costs.

Left: Patented LVL ONE® process technology significantly reduces wheel weight versus a comparable steel or even competitive aluminum wheels. Photos courtesy of Alcoa Wheel and Transportation Products.



Refuse equipment managers should consider spec'ing aluminum wheels for added lifetime benefits.

many steel wheels. Therefore, additional maintenance can result in higher overall lifetime costs and aluminum wheels can improve the appearance of the truck or fleet over a rusty or paint chipped steel wheel.

By their very nature, wheels spend their entire lives in a hostile environment. Several forged aluminum wheel manufacturers also offer additional options for further lowering operating and maintenance costs. Aluminum wheels clean easily with mild soap and water for an everlasting wheel shine. Proprietary surface treatments from wheel suppliers can be integral to the production process of the forged aluminum wheel so it's durable from the start and built to last when properly maintained. A comprehensive production process ensures that wheels will not crack, chip or corrode. And since specially treated aluminum wheels don't need to be polished, they work hard to lower maintenance costs since due to a quick shine up with a simple scrub that keeps the vehicle looking newer for a longer period of time. Combining the advantages of lightweight forged aluminum wheels with these easy to clean benefits helps to lower lifetime operating costs and provide value to equipment managers.

### Maintenance Advantages

Maintenance is also a hot topic among equipment managers, especially as it relates to curbing damage. Forged aluminum wheels offer the strength refuse equipment can rely on, both improving maintenance and furthering the life of the equipment. Additional surface treatments offer maintenance advantages, such as those treated to reduce or eliminate rim flange wear, common among refuse equipment. Some types of aluminum wheels feature a specially treated rim flange that reduces wear and extends wheel service life for heavy haul and shifting load applications. This design feature makes these protected wheels most appropriate for applications where loads are heavy and prone to shifting, causing tire walls to rub against the wheel rims. When considering wheel choices, value should always be the goal. Forged aluminum wheels present lifetime advantages over steel wheels. Although steel wheels are less expensive at the time of purchase, they become more high maintenance over time. Decisions come down to short-term versus long-term planning and navigating the available choices to ensure value over the life of the equipment for the fleet or owner operator. | **WA**

*Brian Thomas is Alcoa Wheel and Transportation Products' (Cleveland, OH) Marketing Communications Specialist. He manages marketing communications and product launch efforts for Alcoa Wheel and Transportation Products. Alcoa Wheel and Transportation Products leads the commercial vehicle, automotive and defense markets with products used in a range of applications including forged aluminum wheels and premium products such as Dura-Bright®, Dura-Flange®, LvL ONE® and M-Series™ wheels for medium duty trucks. Brian can be reached at [brian.thomas@alcoa.com](mailto:brian.thomas@alcoa.com).*

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## Event Wrap-up

# Playing FORE! Research and Education

Kristy Pickurel



### EREF's Annual Fall Classic Golf Tournament IS A SMASHING SUCCESS.

#### ON SEPTEMBER 26, 137 WASTE AND RECYCLING INDUSTRY MEMBERS TEED OFF AT THE 2013 ENVIRONMENTAL

Research & Education Foundation (EREF) Fall Classic Golf Tournament held at the PGA National Resort & Spa in Palm Beach Gardens, FL. All proceeds from the tournament, which was co-hosted by Progressive Waste Solutions and Advanced Disposal, supported EREF's mission, which is carried out by providing scholarships, grants and internships for solid waste research. The tournament kicked off with a Welcome Reception on the evening of Wednesday, September 25. The tournament itself was held on the Champion Course, which was redesigned by Jack Nicklaus in 1990 and now hosts the Honda Classic each spring on the PGA Tour. The tournament was preceded by a Breakfast and followed by an Awards Luncheon.

"Progressive Waste Solutions supports the EREF in its mission to fund and direct scientific research and educational initiatives to expand the knowledge of sustainable solid waste management practices," said Bill Hulligan, President and Chief Operating Officer of Progressive Waste Solutions. "We believe that today's science students will invent tomorrow's technological breakthroughs, and we want to be part of it. We stand beside these bright young minds to help them reach their full potential."

Since the EREF Golf Tournament began in 1993, the event has raised more than \$2.2 million for EREF's work to advance the industry's development of sustainable waste management practices and has become one of the premier networking opportunities for the industry. Often sold out, the tournament is attended by executives from all facets of the industry—service providers, equipment manufacturers, consultants, etc. Participants enjoy the friendly competition as well as the chance to give back to the industry by supporting EREF. Attendees are also given the opportunity to meet some of the faces of EREF's research in person—typically an EREF scholar or intern.

"Advanced Disposal is proud to co-sponsor the EREF Golf Tournament," said Richard Burke, President of Advanced Disposal. "The scientific research developed by EREF greatly benefits the development and growth of our industry and we are honored to play a role in helping to fund the mission of EREF." | **WA**

*Kristy Pickurel is Director of Development and Communications for Environmental Research & Education Foundation (EREF) (Raleigh, NC), a 501(c)3 class charity that funds and directs scientific research and educational initiatives for waste management practices to benefit industry participants and the communities they serve. For more complete information on EREF funded research, its scholarship program and how to donate to this cause, visit [www.erefdn.org](http://www.erefdn.org).*



Charlie Appleby (Advanced Disposal).



Matthew Bright, Ian Mearns, Michael Schmidt and Joe Ursuy (Comerica Bank).

Photos courtesy of Ron McCracken and Keyna Cory.



First Place Team: Jeff Palutis (Progressive Waste Solutions), Steve Martin (CB&I) and Brady Stewart (Progressive Waste Solutions).



Tom Manzke (KRD Trucking), John McGee (KRD Trucking), Jim Cowhey (WCA) and Ken Andresen (KRD Trucking).



The team from Reception, sponsor WCA.

BELOW: EREF President and CEO Bryan Staley with Tournament Co-Sponsors Charlie Appleby (Advanced Disposal) and Joe Quarin (Progressive Waste Solutions).



# Tournament Winners

## First Place

Steve Martin, CB&I  
 Jeff Palutis, Progressive Waste Solutions  
 Brady Stewart, Progressive Waste Solutions

## Second Place

Tim Phanco, Wastequip  
 Kim Henning, Wastequip  
 Gary Sova, Republic Services  
 Lori Cate, Wastequip

## 50/50 Raffle

Kim Hennig, Wastequip – who donated the winnings back to EREF!

## Putting Contest

John Wayhart, Assurance Agency

## Longest Putt

Steve Cowman, EDI

## Closest to the Pin

Robbie DeHart, Environmental Solutions Group

## Longest Drive – Men

Brady Stewart, Progressive Waste Solutions

## Longest Drive – Women

Lori Cate, Wastequip

## Fantasy Golf

First Place – Eric Beer, Flagler  
 Second Place – Kris Carlson, Carlson Environmental Consultants  
 Third Place – Matt Williams, Meritor

## SPECIAL THANK YOU TO THE EREF FALL CLASSIC SPONSORS

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 Progressive Waste Solutions

### Welcome Reception

WCA

### Golf Favors

Wastequip

### Jackets

Volvo Construction Equipment

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### Awards Luncheon Food

Sonrai Systems

### Awards Luncheon Bar

Blue Bag Organics

### Golf Carts

Environmental Solutions Group

### Beverage Carts

WasteExpo/Waste360

Agri America/Environmental Specialties International, Inc.  
 Environmental Solutions Group/TruStar Energy

### Golf Towels

Rush Refuse Systems/  
 Peterbilt

### Golf Balls

Labor Ready

### Pitch Fix

KRD Trucking

### Putting Contest

Reliance Supply, Inc.

### Mulligans

TY Cushion Tire

### Hole-in-One Insurance and

### Goody Bags

McNeilus

### Welcome Bags

Golder Associates

### Bloody Mary Bar

Big Truck Rental

### Cigars

Otto Environmental Systems North America, Inc.

### Glow Ball Putting

O'Brian Tarping Systems

### Holes

Cascade Cart Solutions

Continental

Cummins

Labrie Enviroquip Group

Mack

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PTR Baler & Compactor

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## Working with Online Trailer Sales Sites

Karla Lemon

**Online trailer sales and buying have greatly increased. WHEN PURCHASING AND SELLING TRAILERS OVER THE INTERNET, ONE SHOULD ALWAYS PROCEED CAUTIOUSLY, with an eye out for red flags and of course relying on one's own intuition.**

### WASTE MANAGEMENT, INCLUDING RECYCLING, HAS

drastically increased since opening its first recycling mill in 1972 (Wikipedia Contributors). For example, the first recorded can recycling rate in California was only 15 percent, last year the rate was 87 percent (Mortensen). Since 1988 there has been more than 1 billion tons of steel recycled in North America (Dryden). In addition, since the age of electronics, the need for e-waste trailers has also increased. The awareness of ecological issues has increased, increasing the recycling rate. With the increasing population there is a greater need for managing waste removal and recycling. The need for these types of trailers has grown exponentially. Not only are commercial waste management and recycling trailers needed, but everyday consumers are also recycling materials as a means of making a living and require dump and other type of trailers to do so.

### Online Trailer Advertising Features

A recent trend in the trailer world is online advertising resulting in soaring online trailer sales. Millions of targeted trailer buyers and sellers are online each month and sites have consistently between 3,000 to 4,000 users online at any given time. Online trailer sites host dealers, manufacturers and individuals online looking to sell and buy trailers. They assist dealers and manufacturers looking to sell their trailers. Sometimes, dealers are selling more trailers online than they are in their retail space. Web site features can include an app to post ads lightening fast and a linked inventory allowing the dealer or manufacturer to post an ad one time on the trailer site as well as their own. Other features include an online magazine, rotating banners and videos featured on YouTube.

Some suggestions for the manufacturer and dealer include describing the features in the description area as in depth as possible—the more features described the better. Also, use a unique title; for example, a “7 x 14 Trailer” is not as eye catching as “2014 7 x 14 Tandem Axle Two Toned Cargo Trailer with Rear Ramp”. Always include at least one photo of the trailer; trailer ads without pictures do not sell as well as those with them. A site's goal should be to increase the dealers' exposure, thus selling more trailers.

The site should also be able to assist buyers in the purchasing process, performing most of the legwork. By filling out a quote request, calling or e-mailing, the site can find a trailer as close to what you need at a fair price. Searching by category, latest ads, and finding a dealer by state are also helpful features. Buyers can also use the advanced search feature, which allows them to enter in whatever information they would like—whether its specific details or a generalized search. For example, searching by trailer category and state.

### Buyers Beware

Buyers and sellers beware. There are numerous red flags when purchasing and selling trailers that consumers and sellers should be aware of. This, of course, does not include every scenario out there—new ones seem to pop up every day—but it is a good solid list to go by:

- If the price sounds too good to be true, it usually is.
- If the seller does not have a phone number and they just want to communicate via email, be wary.
- If they are overseas and selling a trailer in the U.S., even if they say they are in the military (sounds feasible) be cautious.
- If the seller is in one place and the trailer is in another. Occasionally this scenario is legitimate, but not usually, so be careful.
- If the seller asks you to provide personal information such as your bank account number, an account password, credit card number, PIN, mother's maiden name, Social Security number or any pertinent personal information—do not provide it. Never give out your address.
- If written communication has numerous spelling and grammatical errors, be wary.
- If you call about a trailer that a business is selling, search the Internet to see if the business appears, go to their Web site and verify the information through an online directory. The site should be assessing every dealer registered with them, in part by the steps given above.
- Listen to your instincts, they are usually correct.

### Sellers Beware

One would think that fraud mostly occurs in buying trailers, but this is far from the actuality. There are



Dump trailer.  
Images courtesy of TrailerShopper.com.

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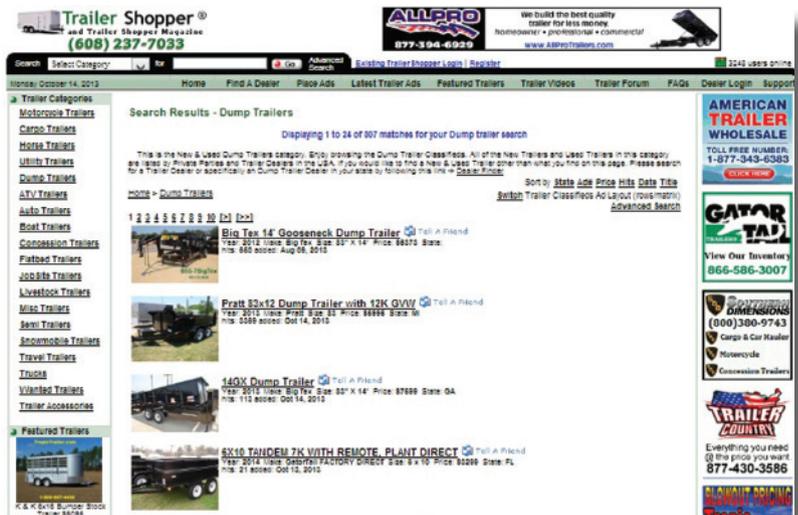
## Working with Online Trailer Sales Sites

numerous red flags when selling a trailer that sellers should be aware of and they include the following:

- Be careful, very careful, when taking a check, money order or cashiers check. If at all possible go to the issuing bank and outright cash the check, money order or cashiers check. If this is not possible, call the bank and verify the funds, even if verified do not give the buyer the trailer and wait until the check, money order or cashiers check clears. Verify this through the issuing bank.
- If someone e-mails or calls about the trailer and wants to purchase it without even looking at the trailer—beware.
- If a buyer wants to purchase the trailer and it seems too easy of a sale, be cautious.
- Again, listen to your instincts, they are usually correct.

There are many avenues to buying and selling trailers. However, online trailer sales and buying has greatly increased with the continued reliance on the Internet. When buying and selling trailers, or anything as a matter of fact, one should always proceed cautiously, with an eye out for red flags and of course relying on one's own intuition. | **WA**

*Karla Lemon is Marketing Coordinator for TrailerShopper.com (Sun Prairie, WI). She copywrites and works on the Web site content for TrailerShopper.com, dealers and sister companies. TrailerShopper.com's motto "Bringing Buyers and Sellers Together" sums up their commitment to buyers and sellers. They offer many advantages to the individual looking to sell their trailer and to the dealer looking to sell many trailers. TrailerShopper.com also assists those looking to purchase a trailer. For more information, call (608)237-7033.*



Example of a Dump category.

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## Waste Haulers Beware

B. Scott Taylor

Not all waste and recycling industry chemicals used ARE "FRIENDLY" TO YOUR EQUIPMENT.

### THIS MESSAGE GOES OUT TO ALL THE OWNERS

and managers of waste hauler fleets that have watched their inventory literally erode and rust over the years. Windows etched, fittings rotted away, chrome dulled, and rubber seals turned into mush. Seems like you just painted those darn trucks just last week.

If any of this sounds familiar, you are not alone. In a recent survey of waste haulers, more than 70 percent complained that the products they used to clean their trucks most definitely damaged the paint and chrome on their vehicles. Most of them answered that, "Its just the cost of doing business and keeping these trucks clean."

Well, folks I'm here to tell you that is simply not true. There are maintenance products out there that won't eat away your paint or your fittings or dull your chrome. In fact some of these products have been tested by McNeilus, Mack, Oshkosh, London, Volvo and a few other manufacturers around the world and they are certified to clean and not destroy equipment.

This is real. These products have been investigated and not only do they work, but they also work better in most cases. The thing is that most "Green" or "Eco-Friendly" products don't work because they can't compete with the nasty stuff. However, the thing is, acid is a great cleaner—but it's too good. Technically speaking, acid doesn't really clean, it destroys things—cleaning is a side effect. The question is what does it ultimately cost you? Re-painting, re-polishing and replacing etched glass is very expensive. There are better, greener cleaners out there, but they may take a little work to find.

Our experience tells us that most chemical distributors don't mean any harm; they are just limited to selling you the products they carry. Most of those products have been in the market forever and are the workhorses in their stable. Until now, there was no real competition. I guess there still isn't as far as they are concerned, but the time may have come where there are enough smaller formulators that actually have produced alternatives that can stand up against those products. Here's the lesson. Look around, go online, research products available, but beware of chiselers trying to sell you watered down nasty stuff or some green concoctions that don't work worth a darn. There is some good stuff available that will save you money and make your rigs look like new. There are people

out there happy to assist you in your search for better, cleaner chemicals.

Keep it clean and green baby. | **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 (www.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, 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 has partnered with Green Endeavor to make a commitment to reduce the use of harsh chemicals in the waste and recycling industry. This is the final step in the long process to be green.

We are excited to celebrate these awards at Waste Expo 2014 and hope we can count on your support for this new commitment to the waste and recycling industry. Turn to page 58 in this issue or visit [www.wasteadvantagemag.com](http://www.wasteadvantagemag.com) to fill out an application.

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# Tank Car Mileage Equalization

Darell J. Luther

**TANK CAR MILEAGE EQUALIZATION CAN AFFECT PROFITABILITY OF RAIL SHIPMENTS. Better understanding of the rules and regulations creates a mechanism for a company to better manage the outcome.**

## MOVING LOADED RAILCARS FROM A SPECIFIC ORIGIN

to a specific destination derives the preponderance of railroad revenue. However, in the case of tank cars, railroads also charge for that portion of empty miles that are in excess of 6 percent of loaded miles. This is considered empty non-revenue mileage that railroads believe are caused by shippers, Lessors or Lessees moving empty tank railcars to reposition railcars to other loading points, railcar shops or to railcar cleaning facilities. Railroads correctly reason that they expend additional manpower, fuel, locomotive resources and administrative costs and these must be recouped at a reasonable rate.

Railroads may also move empty railcars back to loading points using routes different than the route used to ship the railcar, unbeknownst to the shipper. This may be for a number of reasons, including derailments, floods, diversions, traffic congestion, terminal switch capabilities, etc.—all of which are classified as railroad convenience. Regardless of the excess empty miles this causes, the railcar mark owner is responsible for any excess mileage charges.

## Mileage Reporting

Mileage reporting for individual railcars is sent annually to the railcar mark owner. In the case of railcar leasing companies, a Lessee can request or will automatically receive the previous year's mileage reports within three months after the end of the last calendar year. Mileage reporting from the railroads sent to the railcar (or railcar mark) owner is delayed three months due to the required processing time by the railroads. Railroads have up to two years to adjust Mileage Equalization reports and collect additional fees or reimbursement over charges to railcar mark owners.

Tank railcar shippers should keep track of their loading records and compare these loadings, any diversions to other loading points, and railcar shops or railcar cleaning tracks with railroad loaded and empty mileage reports. Many companies have enterprise software that integrates order fulfillment processes with logistics processes. These software packages generally have capabilities to generate historic mileage reports that can be used for mileage comparison

purposes. Tank railcar owners should also generate reports with this enterprise software identifying empty route miles moved per railroad convenience. Although the railcar owner is ultimately responsible

for any empty railcar mileage overage, one can sometimes successfully argue any charges attributable to railroad convenience.

Minimization of empty excess mileage may be accomplished by following these guidelines:

- If you don't have enterprise software that enables monthly mileage reporting, consider using a third party service provider to obtain mileage information. Obtain mileage reports monthly measuring trends so that you can correctly or proactively react to any excess mileage expectations.
- Provide full and complete routing on your billing when issuing disposition of loaded tank railcars. Unless you specifically request a diversion, the railroad will return the railcar by reverse route to the original loading point, which in turn equalizes your mileage.
- Given a choice between two railroads, use the more efficient one. Not only is this a good service choice, but it is also generally the most economical overall choice.
- Understand diversions and how they work. In many cases, the railcar will go to the original loaded or empty destination and then be rerouted. Consideration must be given to diversion points generally identified as the last switchyard the train (railcar) can be re-switched to a different destination. To understand the diversion requirement of a specific railroad is dependent upon that railroad's willingness to communicate their diversion rules and regulations to you.
- Understand the mileage footprint you are going to create in advance of any contract negotiations. If it will generate adverse conditions to mileage equalization, attempt to negotiate out any excess mileage charges.
- After-the-fact complaints and negotiations sometimes prove successful when the railroad(s) are presented with well documented movement records identifying either service disruptions requiring tank railcar movements that generate excess mileage or movements for railroad convenience. One can either use the railroads formal claim process or communicate directly with your railroad sales or marketing representative.

## The Details

Railinc, which is the tariff publishing and record-keeping subsidiary of the Association of American Railroads (AAR), publishes Freight Tariff RIC 6007-N that governs mileage allowances, payments and charges. Supplement 23 to FT RIC 6007-N effective September 1, 2013 lists numerous items that cover mileage payout and mileage equalization and exceptions by participating railroad. Of note are some Shortline and Class I railroads for certain stations that do not follow the provisions of this tariff and/or do not subscribe to

**Table 1:** Historical mileage rates.

| Year | Rate   | Absolute Change | Percent Change |
|------|--------|-----------------|----------------|
| 2008 | \$0.57 |                 |                |
| 2009 | \$0.65 | \$0.08          | 14.0%          |
| 2010 | \$0.63 | \$(0.02)        | (3.1)%         |
| 2011 | \$0.67 | \$0.04          | 6.3%           |
| 2012 | \$0.76 | \$0.09          | 13.4%          |
| 2013 | \$0.82 | \$0.06          | 7.9%           |

each individual tariff item. Albeit too numerous and site specific to recite here, they can be found in RIC 6007-N Supplement 23.

Item 187-E specifically addresses equalization of mileage on tank cars of private ownership. This Tariff Item consists of four specific parts and numerous subsections as follows:

• Part A. Aggregate empty mileage versus loaded mileage:

1. Should aggregate empty mileage accumulated by tank cars carrying any of the reported marks assigned to any one person or company during the calendar year exceed the aggregate loaded mileage during the same calendar year by more than 6 percent, such excess mileage must be paid for by the person or company to whom the reporting marks are assigned at the rate of 82 cents per mile.

2. Mileage on empty cars moving on revenue billing will not be included in the equalization account.

3. Empty mileage accumulated on cars moving to and from repair facilities under DOT mandated retrofit programs or for inspection and/or repair under certain FRA, O&M Circulars or AAR Circular Letter(s) will not be included in the equalization account.

4. Except as otherwise outlined, no adjustments will be made in the equalization account for mileage caused by handling error, cars moving on their own wheels to and from repair facilities, mileage accumulated due to longer routes for railroad convenience.

5. Adjustments will be made in the AAR equalization account for apparent accounting errors due to reporting errors. Private car owners may also request a mileage adjustment with proper mileage documentation.

6. Aggregate loaded and empty mileage will be computed on the basis of actual distance.

• Part B. Reporting of actual loaded and empty mileage:

1. Each participating carrier will submit a monthly mileage report to the

assignee of each reporting mark 40 days after the close of the movement month reporting by individual car number the actual loaded and empty miles moved as well as loaded and empty miles accumulated by all cars bearing each reporting mark.

• Part C. Change of ownership:

1. When a change of ownership occurs, the previous owner shall be responsible for loaded and empty mileage and be required to settle any outstanding mileage accounts.

• Part D. Annual national equalization accounting:

1. After May 20 of each year, the AAR will summarize all empty and loaded mileage by reporting mark. Should aggregate empty mileage exceed the aggregate loaded mileage by more than 6 percent for any such group of reporting marks that the company assigned, the reporting marks will be billed at the rate of 82 cents per mile.

2. An annual national equalization statement will be tendered by the AAR the private mark owner no later than July 1 of the year succeeding the equalization year.

3. Any private car company failing to render complete payment within 30 days of the date tendered will be subject to penalties.

The 82 cent per mile charge for excess empty mileage is subject to revision September 1 of each year and will be retroactively applied to cover the entire calendar year involved. Historical mileage rates are depicted in **Table 1, page xx**.

Tank car mileage equalization is yet another detailed item that can affect profitability of rail shipments. While complex, it first needs to be understood and then, to the degree possible, accounted for in shipment requirements. Better understanding of the rules and regulations of tank car mileage equalization creates a mechanism for a company to better manage the outcome. | **WA**

*Darell J. Lutber is president of Forsyth, MT-based Tealinc Ltd. He can be reached at (406) 347-5237, via e-mail at [darell@tealinc.com](mailto:darell@tealinc.com) or visit [www.tealinc.com](http://www.tealinc.com).*

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# Breakthroughs and Innovations



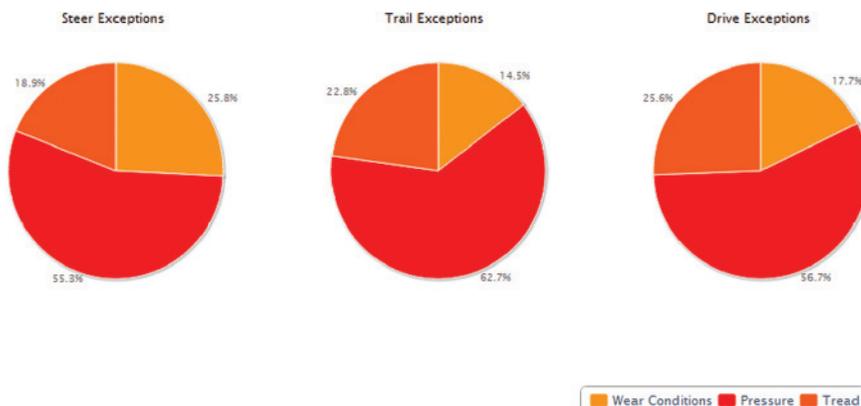
GOODYEAR's (Akron, OH) powerful Tire Trac tool, which is offered through the Goodyear-FleetHQ suite of business solutions, allows you to monitor your fleet's service history, as well as the performance of individual tires – collecting, documenting and presenting key data in an easy-to-access format. It also has the ability to track tire purchases, installations, removals and other functions to help you obtain a better return on your tire investment. Goodyear's Tire Trac database contains information on more than 750,000 truck tires of all brands, sizes and applications—nearly every truck tire available in North America. This database is continuously updated as dealers enter more information into the system.



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## Exception Stats

Total Exceptions: 8,915    Exception Percentage: 8.55%



**GALBREATH®** (Winamac, IN), a Wastequip brand, announces the launch of the A5-200 Series Roll-off Trailer. Designed to handle punishing loads, this lightweight trailer has a shorter overall length for greater maneuverability, and handles payloads from 33,000 to 39,000 pounds with ease. With container size capacity up to 26 feet, more materials can be transported per haul. The 200 Series Roll-off Trailer is available in outside rail (OR), extendable tail (EX), inside/outside rail (IO) and deadlift (HH) configurations. The trailer features two telescoping cylinders that provide greater lift stability with heavy loads to safely handle up to 60,000 lbs. Plus, its lower trailer height accommodates tall containers, allowing more material to be transported.

Galbreath's A5 series roll-off trailers are among the most popular trailers, with models available in various configurations that are incredibly easy to operate, and outperform anything else on the market. There was a need in the marketplace for a lightweight hoist trailer that would handle heavy payloads with greater accessibility and maneuverability, so it made a lot of sense to add the 200 Series Roll-off Trailer to the already-extensive line. The new trailer redistributes the weight of the load, allowing for the transfer of at least 50 percent more material per haul than a traditional hoist truck. Available options for Galbreath's 200-Series Roll-Off Trailer include tarping systems, aluminum hubs, aluminum or poly fenders, work lights, inside-cab controls, automatic grease systems and toolboxes.

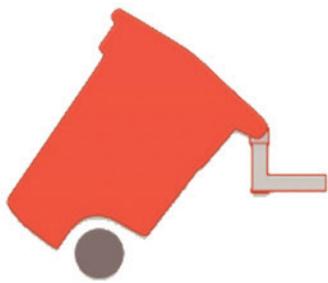
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Cigarettes are the number one littered item in the world. Thirty-four percent of trash by count collected in California is cigarette butts. **CIGARETTE POLLUTION SOLUTIONS®** (Oceanside, CA) Butts Only Box® (B.O.B.) receptacles were designed to help the environment in various ways. The receptacles help shield against rain and irrigation until servicing. This helps prevent leaching of chemical compounds into our fragile ecosystems. The receptacles are lockable to prevent access to underage smokers and wildlife. The receptacles do not use sand, which must be mined, transported and ultimately buried in a landfill.

The B.O.B. roadside model is designed so motorists can empty car ashtrays without the fear of starting trash can fires. The stainless steel trail model B.O.B.s are designed for the smoker on foot, they mount to almost any surface or object and last years in harsh marine environments. Models range from golf cars to boats. The receptacles have been used by the cities of Carlsbad and Oceanside for the past seven years and Caltrans has collected over a million cigarette butts with their cigarette litter prevention program the first year. The city of Las Vegas has installed receptacles in city parks and are in the process of installing receptacles at bus stops throughout the valley. Cigarette Pollution Solutions is dedicated to preserving precious resources for future generations, one butt at a time.

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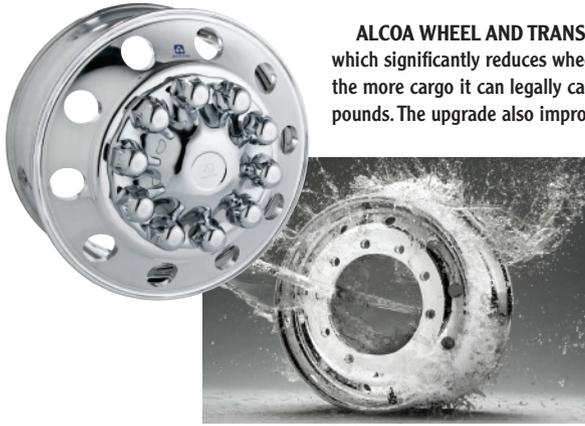
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## Breakthroughs and Innovations



**ALCOA WHEEL AND TRANSPORTATION PRODUCTS'** (Cleveland, OH) forged aluminum wheels feature patented LVL ONE® process technology, which significantly reduces wheel weight versus a comparable steel or even competitive aluminum wheels. It's no secret that the lighter the truck, the more cargo it can legally carry. Converting eighteen 22.5" wheels from steel to Alcoa LVL ONE® forged aluminum wheels saves more than 600 pounds. The upgrade also improves fuel efficiency, and the strength, durability and low weight deliver environmental advantages to complement their financial benefits.

Alcoa Dura-Bright® wheels clean easily with mild soap and water for an everlasting wheel shine. Dura-Bright is a patented surface treatment integral to the production process of the forged aluminum wheel, ensuring wheels resist cracks, chips or corrosion. And since Dura-Bright wheels don't need to be polished, they work hard to lower maintenance costs since they shine up quickly with a simple scrub and keep the vehicle looking newer for longer. Combining the advantages of lightweight forged aluminum wheels with the easy to clean benefits of Dura-Bright wheels helps to lower lifetime operating costs and provide value to equipment managers.

Alcoa Dura-Flange® wheels feature a specially treated rim flange that reduces wear and extends wheel service life for heavy haul and shifting load applications. This design feature makes Dura-Flange® wear protection wheels most appropriate for applications where loads are heavy and prone to shifting, and is the only solution on the market that protects from this type of wear.

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Heating hydraulic fluid prior to operating equipment not only increases productivity because workers don't have to wait around, but warm hydraulic fluid also reduces pump wear and the chances of pump cavitation and expense associated with blown seals that can result in unnecessary down time. For large reservoirs, ARCTIC FOX's (Delano, MN) HYDRA LINER series of fluid warmers is the perfect choice. Available in either 2" NPT or 2" Straight Thread O-Ring Seal attachments, and ranging from 2,100 to 8,000 BTU/hr of heating potential, they make short work of the preheating process.

They are 100 percent stainless steel construction, designed and built to withstand the working environment of heavy duty off-highway construction, mining and exploration equipment. Covered by a five-year, 600,000 mile warranty. For smaller reservoirs, ranging from 8 to 32 gallons, the HOT FOX™ model of hydraulic fluid warmer is a wise choice. This model can be mounted vertically from the top down, or



by using either the Arctic Fox Weld-In or Threaded Adapter, it can be mounted horizontally or even vertically up from the tank bottom. Having this much installation flexibility increases the potential for heating hydraulic fluid when space is limited. For even smaller reservoirs, ranging from 1 to 5 gallons, there is the MINI Heat Exchanger, a 7/8" diameter heat exchanger, ranging from 6" to 10" in length, it is ideal for small vehicle or equipment oil pans, hydraulic reservoirs or other small size containers with fluids requiring heat.

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Does your organization communicate with the public about your recycling and environmental activities? If so, you already know it's time-consuming and tedious. ECO PARTNERS (Carmel, IN) has built a 20-year business handling this task for waste management and municipal clients all over the country. They research, write, design and print affordable newsletters that are tailored to your community.

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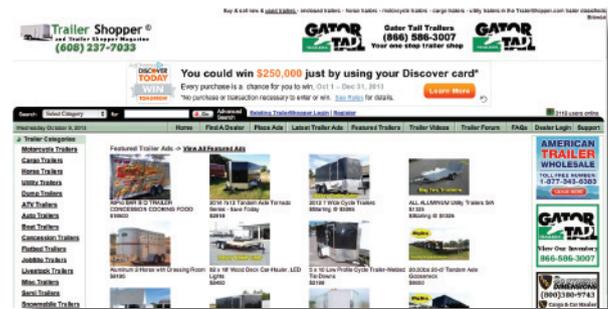
Whether you are reaching out to local residents, students, businesses or environmental partners, Eco Partners' customized newsletters are your answer to distributing the latest environmental news and updates. Eco Partners create impactful newsletters and have clients across the country who rely on them to communicate important local recycling and solid waste program updates and environmental tips to enhance the environmental "IQ" in their communities. Just give them a call and they'll do the rest.

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# WasteAdvantage<sup>magazine</sup>

The Advantage in the Waste and Recycling Industry

 Recycling  Transfer Stations  Landfills

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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.

**Q&A**

# The Five Ws of Recycling: What, Why, When, Where, Who (and How)

Carl Smith

**MAXIMIZING THE SUSTAINABILITY OF A PRODUCT REQUIRES MORE THAN**

just tossing it into a curbside recycling bin. It requires a comprehensive approach to its entire lifecycle—one that encompasses the environmental awareness and practices of manufacturers, consumers and recyclers. This is increasingly important as consumers expand their use of items containing potentially hazardous materials and as limited landfill space shrinks. It is more vital than ever that materials with the potential to be recycled are diverted from the waste stream and, instead, routed to an appropriate processing facility that can recycle them or ensure proper end-of-life disposal.

**What is Responsible Recycling?** Responsible recycling is the practice of being held accountable for each step of a product's lifecycle. From the materials used in a product to the collection of used materials to the proper disposal method—everyone plays a role in accepting the responsibility to ensure we are minimizing the long-term environmental impact of products. Responsible recycling requires the participation of manufacturers, consumers and recyclers.

Ultimately, manufacturers determine the sustainability of a product through both the design and materials used. Can the different materials be properly identified? How easy is it to recycle each part? Are all recyclable materials, such as the rechargeable battery, easily accessible? These and other points must be considered at the product-conception phase to help ensure that a truly sustainable product makes its way to the market place.

Consumer participation in responsible recycling programs has been buoyed by a rise in awareness of recycling best practices. Approximately 85 percent of Americans claim they have recycled in the last year, yet 29 percent also feel they should be doing more.<sup>1</sup> If it's easy—the material is easily accessible and if they have convenient recycling options, such as curbside and retail drop-off locations—they can.

Recyclers—sorters and processors—ensure safe handling and processing of potentially hazardous materials and also reclaim reusable materials. They are a vital stage in the sustainable product lifecycle.

**What Types of Facilities are Available to Accept Recyclable Material? How Do You Find Out Where to Go?** Accessibility to recycling options is an important consideration related to finding and using recycling facilities and collections sites. Where we live is a key factor here. Urban and suburban populations have access to a variety of collection options—curbside pickup, retail drop off locations, municipal collection hubs and more—some rural populations may not have as many options. While our home location may determine ease of access and convenience of recycling, a wide range of options exist that make proper end-of-life disposal of recyclables quick and painless.

Consumers see curbside recycling as a convenient solution for every recyclable. However, some common household waste items such as fluorescent bulbs, paint and more are often regulated due to health and safety concerns, which limits

the ways they can be handled. Other recycling options fill the gap to help ensure all materials can be properly processed. Many local retailers provide recycling opportunities through in-store drop-off and collection sites. Retail chains—such as Best Buy, The Home Depot, RadioShack, Staples and Lowe's—have implemented take-back programs for items such as e-waste, wood pallets, rechargeable batteries, fluorescent bulbs and more. These “shop and drop” programs mean recycling can be managed during regular business hours.

To provide centralized recycling options for its citizens, municipalities often hold semi-annual or quarterly collection events for recyclables with special handling requirements. In addition, many municipalities have identified specific collection facilities to serve as a central recycling hub to meet regional needs.

Consumers can also search for and find many recycling options online. On their sites, municipalities often provide a detailed listing of



Call2Recycle shipping boxes allow for safe and easy transport. Images courtesy of Call2Recycle.



Call2Recycle ensures ease and safety in recycling rechargeable batteries: bag, seal and drop.

the items they take back, the recycling locations for each product, and the dates and times facilities are open. Many non-profit take-back programs, such as call2recycle.org, often have a locator feature on their Web sites to assist consumers in recycling their products. National recycling directories are searchable on the Web.

**What Steps Do We Need to Take to Help Increase Recycling Participation? What Types of Materials Are Becoming More Prominent?** Two improvements, implemented properly, can go a long way to reduce waste and help manage the increasing volumes of recycling. Improved product designs that consider proper end-of-life disposal as a priority and improved communications that address consumer education can help improve participation in recycling programs. Education can help consumers embrace—and even demand more—improved product design because of its larger environmental impact. For instance, there have been significant changes in packaging and the use of plastics due to consumer feedback.

eWaste is becoming a more prominent focus in the recycling community worldwide due to the rapidly growing volumes of electronic waste, such as cellphones, laptops, tablets, e-readers and more. Rechargeable batteries, often considered to be a component of eWaste, are also seeing increased usage and waste. Each year, Americans buy more than 350 million rechargeable batteries<sup>2</sup> and send about 14,000 tons of them to landfills<sup>3</sup>—most come from wireless devices like cellphones, e-readers, laptops and tablets. These batteries take up space in landfills and may discharge materials that could be harmful to the environment.

With 322 million wireless products in use in the U.S.,<sup>4</sup> mobile, consumption of connected devices is expected to increase by 100 percent by 2020. These products are all powered by rechargeable batteries. Responsible recycling of both the battery and the device will divert millions of tons of potentially harmful heavy metals and e-waste from the waste stream.

**How are Rechargeable Batteries and Cellphones Recycled?** Consumers may take their waste that requires special handling to collection sites across the nation, including recycling centers that have been established by their municipality. Many national retailers also serve as collection sites where consumers can drop off recyclable products.

Through the Call2Recycle collection program, collection sites ship batteries and cellphones for free to contracted sorting and recycling facilities. Precious metals recovered from old batteries are used to create new batteries and stainless steel

products. Cellphones are recycled, refurbished and/or resold. When resold, a portion of the proceeds are used to fund the cellphone collection program and public education. None of the reclaimed material makes its way into landfills. For Call2Recycle, the results are measurable. Call2Recycle has diverted more than 75 million pounds of rechargeable batteries and cellphones—approximately 6 million pounds of batteries in 2013 alone—from local landfills since collections began in 1996.

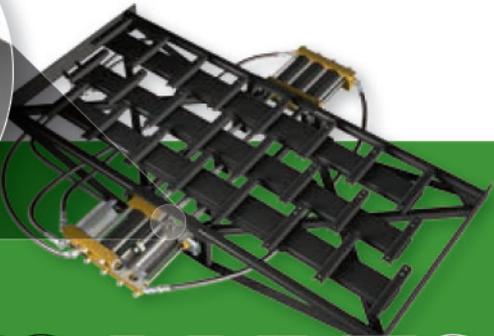
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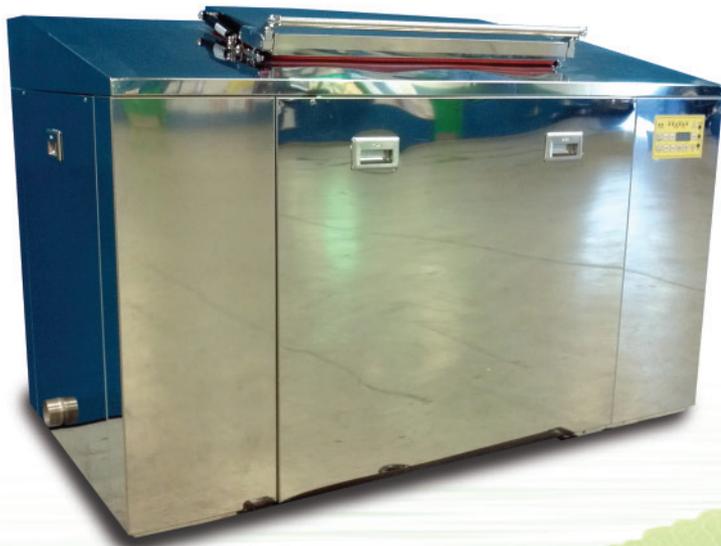
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What Steps Can You Take to Inform People About Battery and Cellphone Recycling? What Kind of Outreach Programs Work Best? Simply creating recycling programs and the infrastructure to manage them does not ensure participation. Ongoing educational programs that raise awareness—about responsibility and accessibility—are key to ensuring success and helping move people from just knowledgeable to active participants. Education can play a major role in changing behaviors related to recycling. A 2012 study commissioned by Call2Recycle, and conducted by IPSOS, revealed that, of people who didn't recycle rechargeable batteries and cellphones in the previous year, 37 percent 'didn't know where' to recycle these items. One-quarter (24 percent) 'didn't know they could' recycle items like cellphones and batteries, while two in 10 (15 percent) 'thought that they had to go to a special place to recycle them'. Four percent 'thought they could only recycle them once a year at a special place' or provided some other reason.<sup>5</sup>

One of the best sources of consumer education surrounding recycling has been product stewardship organizations. These groups—often funded by product manufacturers—are essential to the sustainable lifecycle of a product. They work with manufacturers, advocating for sustainable design, educating consumers on the “how” and “why” of recycling, developing collection partners, and providing assistance and direction in proper end-of-life disposal.

Effective outreach programs provide consumers with accessible and easy options for recycling. These programs know that simplicity in recycling at a retail location can be reinforced by a well-placed, graphically appealing collection bin. Collections can be increased and accessibility can be improved with a small change in hours of operation. Efficient outreach can also engage and motivate consumers, rewarding their good behavior. Incentives for participation can include coupons at retail outlets or “recycling day” activities.

Rechargeable batteries power many everyday items including laptops, cellphones, cameras and power tools.



**What is the Utopia?** True product sustainability requires end-to-end recycling accountability. If each participant—manufacturers, consumers, product stewardship organizations and retailers—take responsibility for its part in the lifecycle of a product, true recycling success can be achieved. The results of a unified effort to be more environmentally responsible are healthier communities and a healthier planet. | **WA**

*Carl Smith is CEO and President of Call2Recycle (Atlanta, GA), North America's first and largest consumer battery stewardship and recycling program. Carl leads the organization in its efforts to help preserve the environment through responsible recycling of batteries. With more than 322 million wireless devices (phones, tablets and e-readers) in use in the U.S. alone—all powered by rechargeable batteries—recycling both the battery and the device are more important than ever before. Carl can be reached at (877) 723-1297. Beyond the Box: What happens to rechargeable batteries once they are dropped in a Call2Recycle collection box? Take a tour of the processing facility outside Pittsburgh, PA at [www.call2recycle.org/battery-video](http://www.call2recycle.org/battery-video).*

**Notes**

1. Call2Recycle.
2. EPA.
3. Earth 911.
4. CTIA.
5. The IPSOS question allowed respondents to answer more than one question.

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# Oakland 2014



## Recycling The Many Uses of Recycled Rubber

Brad Swenson

**IF YOU THINK THE BEST USE OF RUBBER IS FOR YOUR CAR TIRES, THEN** think again! Old scrap rubber tires can be recycled into many different outputs in order to be recycled and reused in new products. These new recycled products, or as they are called, secondary rubber products, are used in many everyday products and places.

You might be surprised to learn about the different industries using recycled rubber products. For recyclers that need a new revenue stream, selling recycled rubber to manufacturers of secondary rubber products can be a great way to

generate new revenue. Remanufacturing a better product out of recycled rubber has really grown to be its own industry in recent years. Recycling companies can take advantage of this industry through choosing the right tire recycling equipment and starting their own operation.

### Where to Find Recycled Rubber

There are many products and uses for recycled rubber, and some of them are more commonplace than you might think. Many are found right in the same



Various rubber products can be manufactured with recycled rubber. Images courtesy of ECO Green Equipment.



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places the old tires were used in as well, like parking lot wheel stops and speed bumps. Here are a few other places you will find secondary rubber products:

- *Playground Mulch*—Soft rubber chips used in most school grounds today help protect children during play.
- *Patio Umbrellas*—No more ripping and tearing your patio umbrella in a windstorm. Recycled tires are now being made into weighted stands and waterproof umbrellas for your patio.
- *Bumpers*—These come in all shapes and sizes and uses, from shipping docks and boat docks to wheel chocks, doorstops and wedges.
- *Fitness Flooring*—Protecting you and the ground you just dropped that weight on is probably some type of recycled rubber mat.
- *Animal Mats*—Nothing says waterproof or urine proof like rubber. You will find these in many homes and even in equestrian parks and facilities.
- *Asphalt Additive*—Once again, another application where tires meet the recycled tires.

### Secondary Rubber Products

Secondary rubber products manufacturers use different types of recycled rubber to produce these and other secondary rubber products. Most can be derived from old tires.

Here are a few of these recycled rubber products that are used to make new secondary rubber products:

- *Rubber Chips*—Tire recycling plants make clean cut consistent sized rubber chips with or without the fiber and wire contained within.
- *Wire-Free Rubber Mulch*—Sometimes the most useful and most difficult to produce, wire-free rubber mulch is just that: wire free. Safe to use or turn into different products without cleaning wire out.
- *Contaminant Free Rubber Granules or “Crumb Rubber”*—Used a lot as an additive for modified asphalt, you want to find the rubber granules made by plants to be only of the highest grade. Other applications for crumb rubber are being used in the football, soccer and other athletic fields sporting artificial turf.

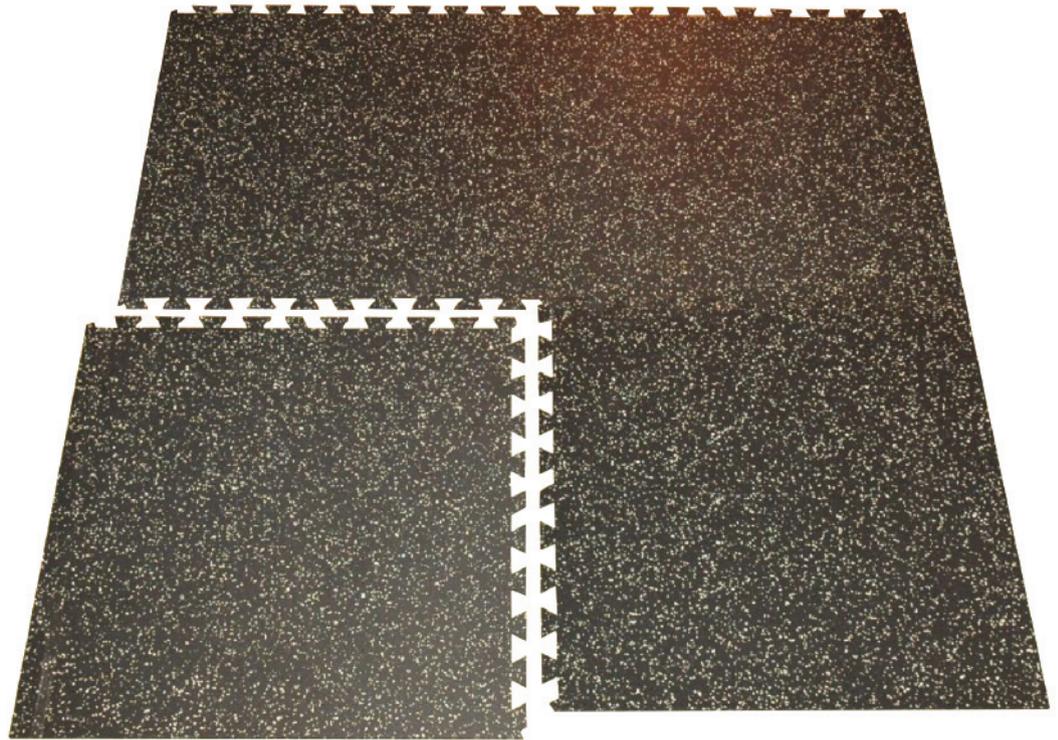
Playground equipment surfaces use recycled rubber to protect users from falls and injury.



• *Fine Mesh Rubber Powder*—The finest and cleanest rubber powder, varying in sizes up to 120 mesh—are being used in various applications such as injection moldings to strengthen secondary products.

Make sure if you start a tire recycling plant that you purchase the right equipment which will make only the best easy-to-use recycled rubber for secondary rubber products. Look for equipment that can provide consistency in its rubber output day to day. This will provide secondary product manufacturers with the ability to use the recycled tire products immediately without needing to prepare the recycled rubber before manufacturing. | **WA**

*Brad Swenson is Sales Manager for ECO Green Equipment USA (Salt Lake City, UT), a leading tire recycling equipment company specializing in full turnkey plant design, engineering and technology. ECO Green provides the full line of profitable systems for rubber recycling at significant cost savings for customers. For more information, call (801) 505-6841 or e-mail sales@ecogreenequipment.com.*



Various rubber mats are now produced using recycled rubber. Uses include athletic, equestrian and shop mats/surfaces.

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## Landfills

# Seven Useful Tools in Gull Management— And One That Is Indispensable

Mike Givlin

### ONE OF EVERY WASTE MANAGEMENT FACILITY'S ONGOING CHALLENGES

is managing gull activity. Gulls can be the source of a number of problems: creating a variety of issues for neighboring properties, serving as potential dangers to nearby airfields, causing structural damage and mechanical issues, and posing health risks for workers. Responsible waste management facilities are faced with dozens of choices for managing populations, and the question most often asked is, "What is the best tool to use?"

The answer is not what many professionals want to hear. There is no silver bullet, and there's no "shortcut" to reducing gull activity. But, don't lose hope. With an effective gull management strategy, you can achieve effective, long-lasting reductions in populations.

How? With a customized, integrated approach designed specifically for your site. There are a wide variety of tools available, and a plethora of companies that will willingly sell you services like pyrotechnics, chemicals and falconry that promise to mitigate gull issues. However, environmental factors, the design and layout of your site, the type of waste and any number of other factors can affect what tools will work at your location. Most importantly, remember that there's no silver bullet. The best programs will use a number of tools to achieve maximum success.

Steritech's bird management experts work with their clients to develop integrated programs for controlling gulls. There's no silver bullet. An integrated approach designed especially for your facility will take into account environmental conditions and bird pressures to create an effective solution. Photo courtesy of Steritech.



## Seven Useful Tools in Gull Management

With technology advancing constantly, there are dozens of new tools brought to market each year. When used properly, these seven tools have proven to be effective. When carefully selected for your facility and used in combination with each other, these tools can help you realize your gull management goals. Here's what you need to know.

### Pyrotechnics

These specially designed firecrackers are used to frighten birds. When deployed properly on a randomized schedule, they are extremely effective in deterring gulls from a facility. However, when used improperly, not only will they become ineffective, they can also create an annoyance for neighboring properties.

### Propane Cannons

Like pyrotechnics, propane cannons make loud noises, similar to that of a shotgun, that frighten birds away. The mistake many facilities make is having propane cannons on a timer and keeping them in a fixed location, giving gulls the opportunity to figure out the pattern. Videos taken of propane cannons used in this manner show birds resting on the cannon, lifting off before the cannon fires, and then resettling on the machine. To be effective, propane cannons must move around a property and be used only occasionally.

### Gull Distress Calls

These loud, speaker-emitted sounds simulate what an injured or dying gull would sound like. When used appropriately, other gulls in the area hear the distress call, warning them of potential predators or danger. If used too often or at the wrong times, the distress call simply becomes another noise to which gulls acclimate. Additionally, the loud noise can become disturbing to neighboring properties.

### Gull Effigies

These manmade replicas of birds in distress, danger or death work similarly to distress calls, serving as a visual cue to birds that an area may be inhospitable. To avoid gulls becoming "adjusted" to the site of the effigies, they must be in constant motion and be moved to different areas of a site on a frequent basis.

### Green Lasers

Deployed manually by a wildlife management professional, rather than by a machine, green lasers are aimed directly at birds. When the laser hits a bird, the frequency of this concentrated beam of light makes the bird uncomfortable, triggering it to relocate. Gulls do not become acclimated to lasers, and lasers do not harm the birds. However, this method must be used responsibly to avoid interfering with neighboring properties, aircraft or freeways.

### Long-Range Acoustical Devices (LRAD)

Think of this relatively new tool as the audio version of a laser. LRADs are aimed directly at birds and project a concentrated beam of sound at a high decibel. The sound causes great distress for birds at which it is aimed, causing them to move rapidly out of an area. The sound does not harm birds, and once birds leave the beam, they are no longer affected. Because LRADs are fired manually by professionals, they are targeted and have not caused issues for surrounding facilities or workers at facilities where they are used.

### Methyl Anthranilate (MA)

Methyl anthranilate is a chemical compound that can be found naturally in grapes, jasmine, lemons, mandarins, strawberries, and other flowers and fruits. It is useful in deterring a wide variety of nuisance birds. MA irritates the trigeminal nerve, causing birds temporary irritation in their beak, eyes and throat—think of it as causing a reaction similar to that pepper spray might have on a human. Although mammals also have a trigeminal nerve, MA does not affect them because the nerve, which is exposed in birds, is deeply embedded in the skeletal system for mammals.

MA can be applied in a number of ways, but it is most effective when used as a haze over areas where gulls are problematic. As birds fly through the haze, they become irritated and see the area as inhospitable, relocating themselves. Hazes can be machine-generated and set on a timer to provide continuous protection and control the amount of product used. However, haze applications can be rendered ineffective by shifts in the wind that disperse or relocate them, so constant monitoring and knowledge of how and when to reposition machines is necessary.

Some wildlife management firms suggest applying MA directly to waste to deter birds from eating it; however, experts do not recommended this practice. If used in this fashion, MA must be applied every time new waste is brought in, significantly increasing the amount of product that must be used.

### The Critical Tool to Success

As you can see, when used properly, almost all of these tools can be successful to an extent. The key to success in any bird management program is not the tools, but the people using them. Whether you choose to run your gull management program in-house or contract it out, finding the right person or team to run your program is the one absolutely indispensable tool you must have.

To determine the most effective solutions, your program must be run by a dedicated resource, preferably someone with a background in wildlife management. In addition to knowledge, this individual or team will have the time, training and ability to continually re-evaluate methods in place to determine effectiveness and adjust as necessary. In-house resources are often used for multiple tasks, limiting the time they can spend on bird management, which can detrimentally affect the program. To be most effective, an in-house resource must be dedicated full-time to bird management and receive regular training to stay current. Alternatively, using a professional wildlife, bird or pest management firm typically costs a fraction of what employing someone at your facility might. In addition, these professional firms ensure regular training for their employees, and are often the first to hear about innovative new methods.

The headaches created by gulls for waste management professionals have gone on for too long. With the right tools, time, effort, and most importantly, people, successful gull management is achievable. | **WA**

*Mike Givlin is Vice President of the North American Bird Program at The Steritech Group, Inc., a leading North American brand protection services firm specializing in pest prevention. Mike is an expert in bird management, and has successfully implemented solutions for gulls, geese, pigeons, grackles and more at commercial retail and hospitality properties, large airports and waste management facilities. For more information, call (800) 868-0089 or visit [www.steritech.com](http://www.steritech.com).*

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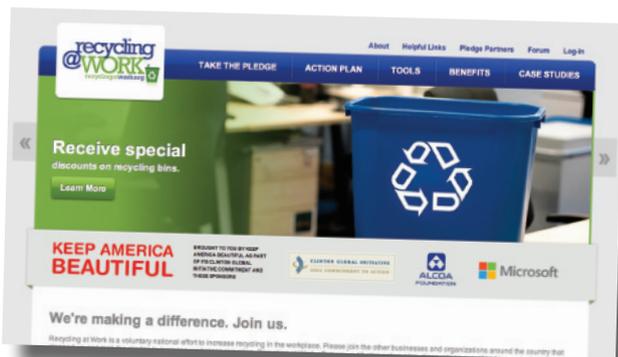
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**KEEP AMERICA BEAUTIFUL's** (Stamford, CT) Recycling at Work initiative, designed to encourage businesses, organizations and institutions around the country to pledge to increase workplace recycling, has launched a new Web site, [www.RecyclingatWork.org](http://www.RecyclingatWork.org), that features a host of tools and resources, including recycling bin discounts. Recycling at Work is a joint Clinton Global Initiative commitment between KAB and Alcoa Foundation, one of the funders of the program, to increase U.S. recycling rates. Keep America Beautiful is soliciting businesses and other organizations to pledge to a 10 percent increase in the recycling of beverage containers, paper products, electronics and other commonly generated recyclable materials found in the workplace.

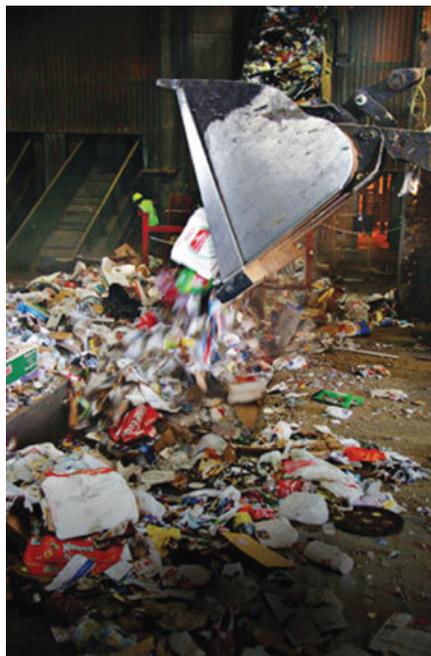
Recycling at Work is guided by a hand-picked advisory council, comprised of government officials, sustainability experts and nonprofit partners of KAB. Recycling at Work offers immense value to local and city governments who might not have the budget to build their own office recycling initiative. For existing programs, Recycling at Work provides a unique opportunity to renew an organization's commitment to recycling and provides valuable tools to augment what is already in place.

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Application Fee Enclosed: \$

Type of Credit Card:       Visa       Mastercard       American Express

Expiration Date \_\_\_\_\_ Card No. \_\_\_\_\_ code (last 3 or 4 numbers found on back/front of card) \_\_\_\_\_

Name that appears on credit card for credit card authorization. \_\_\_\_\_

Signature (required) \_\_\_\_\_ Today's Date \_\_\_\_\_