



American Recycler

NewsVoice of Salvage, Waste and Recycling

AmericanRecycler.com

FOCUS: Waste

Plastics to fuel: Status in the industry today

by MAURA KELLER

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Embracing tech: A smart waste solution



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As more and more cities are starting to ban the use of plastic bags at stores, the recycling industry is setting its sights on transforming plastics into alternative energy and fuel. What has been the evolution of converting post-use non-recycled plastics into diesel fuel in the U.S.? And how has this process been impacted by plastic recycling activities in the U.S.?

According to Dr. Thathiana Benavides, assistant energy systems analyst at Argonne National Laboratory, the need to divert valuable material like plastic from landfills has driven the industry to look for alternatives that are economical and environmental friendly.

“Recycling rates have been increasing in the last few decades,” Benavides said. “But there are plastics that are not easy or economically feasible to recycle. Conversion technologies can be applied to transform non-recycled plastic into a valuable commodity while reducing landfill space usage, in addition to creating a reliable source of alternative energy from an abundant, no-cost feedstock.”

Plastics to fuel (PTF) can convert any type plastic into fuel, but industries are focusing more on waste plastic that cannot be recycled. PTF is the transformation of plastic – or plastic waste – into ultra-low sulfur diesel (ULSD) fuel. In this process, non-recycled plastics (NRP) are heated to approximately



With a solid focus on non-recyclable plastic, the plastics-to-fuel process should not have an impact on current plastic recycling practices.

PHOTO BY HUGUETTE ROE | DREAMSTIME

430 to 550°C in the absence of oxygen. During pyrolysis, gas, liquid fuel, and char form in proportions that depend on the pyrolysis system and the composition of the plastic feedstock.

Different technologies for the conversion process, such as pyrolysis and gasification, may be used but the most popular and simplest is pyrolysis. Pyrolysis uses high temperatures (in the absence of oxygen) to break down the large molecules. As a result there is gas, liquid fuel and char produced.

As Benavides explained, a large fraction of plastic in municipal solid waste (MSW) is not recycled in commercial markets due to contamination, logistics and limited markets. “I don’t think that PTF competes with recycling activities. A good example is Polyethylene terephthalate (PET),” Benavides said. “This plastic resin has the largest recycled rates and based on the result of the survey we conducted, companies did not use it in their PTF technology. So I don’t think that PTF technology will impact – in a negative way – plastic recycling activities.”

Jennifer Dunn is a chemical engineer examining the cradle-to-grave energy and environmental implications of the production and use of transportation fuels and technologies at Argonne National Laboratory. She leads the bio-fuels life cycle analysis team and examines the life cycle impacts of

automotive lithium ion batteries. Dunn identifies the key factors driving environmental effects, such as greenhouse gas emissions, of these technologies. She then identifies possible burden shifting of environmental effects from one life cycle phase to another. Much of Dunn’s work is incorporated into Argonne’s Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation model, which has more than 20,000 users worldwide.

“There has been a concerted effort to develop PTF technology in the U.S.,” Dunn said. “The first commercial scale plant for converting waste plastic to fuels is slated to open in Indiana and BP is planning to purchase the products.”

Specifically, Brightmark Energy, a San Francisco based renewable energy development company that develops, owns and operates waste and energy projects, has acquired a majority interest and invested \$10 million in a groundbreaking plastics-to-fuel technology company, RES Polyflow in Chagrin Falls, Ohio. Brightmark Energy’s project employs technology solutions including combined heat and power, biogas and waste-to-energy that are tailored to customer needs.

RES Polyflow’s patented plastics-to-fuel process complements current recycling efforts by converting low-

See PLASTICS FUEL, Page 4

According to www.ReuseThisBag.com:

- In the U.S., two states (California and Hawaii) have banned plastic bags on a statewide level.
- Four U.S. states (Delaware, Maine, Rhode Island and New York) have mandatory recycling or reuse programs in place.
- Ten U.S. states (Arizona, Florida, Iowa, Idaho, Indiana, Michigan, Minnesota, Missouri, Mississippi and Wisconsin) have placed preemptive bans on banning plastic bags.
- Two hundred U.S. municipalities have banned or taxed plastic bags; outcomes have been largely positive, including San Jose, California: Reduction of plastic bags in storm drains (89 percent), rivers (60 percent) and residential areas (59 percent); average number of bags per person reduced from 3 to 0.3.
- San Francisco, California: Savings of up to \$600k per year in plastic processing fees.
- Seattle, Washington: Reduction of plastic bags in both residential (48 percent) and commercial (76 percent) waste.
- Globally, plastic bags are banned in 32 countries, 18 of which are in Africa.

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NJ DEP awards \$14 million in grants to promote recycling

Local governments in New Jersey will share \$14.3 million in grants to further enhance recycling efforts, based on 2016 recycling performance, New Jersey Department of Environmental Protection (DEP) commissioner Catherine R. McCabe announced.

The recycling tonnage grants are awarded through the state's Recycling Enhancement Act and are funded through a \$3 per-ton surcharge on trash disposed at solid waste facilities statewide. The DEP then allocates that money back to municipalities based on how much recycling each community reports accomplishing during a particular calendar year.

Grants are based on materials collected and recycled and are to be used to further improve a community's recycling rate either by funding a recycling coordinator position, sponsoring household hazardous waste collection events, providing recycling receptacles and pickup in public places, maintaining leaf composting operations, doing educational outreach about the importance of recycling, or implementing curbside recycling pickup programs.

For calendar year 2016, the most recent year for which data is available, New Jersey generated 9.7 million tons of municipal solid waste, with 4.26 million tons recycled and 5.4 million tons disposed. This resulted in a slight increase in the recycling rate, to 44 percent, from the year prior. New Jersey's recycling rate exceeds the national recycling rate average of 34 percent, but is below the state's recycling goal of 50 percent.

Overall, New Jersey in 2016 generated 22.6 million tons of solid waste, which includes municipal waste plus construction debris and other types of non-municipal waste. Of the total collected, 13.9 million tons were recycled and 8.7 million tons were disposed of, for an overall recycling rate of 61 percent, down 2 percent from 2015.

Municipalities receiving grants of more than \$100,000 include:

Bergen County: Paramus, \$130,864; South Hackensack, \$197,287 Camden County: Cherry Hill, \$103,329 Cumberland County: Vineland, \$282,504 Essex County: East Orange, \$106,334; Newark, \$232,153 Gloucester County: Logan, \$109,177 Hudson County: Jersey City, \$423,248; Secaucus, \$156,353 Mercer County: Hamilton, \$150,719 Middlesex County: Edison, \$269,329; Monroe, \$181,542; South Brunswick, \$190,633; Woodbridge, \$147,187 Monmouth County: Marlboro, \$119,531 Morris County: Parsippany-Troy Hills, \$161,838 Ocean County: Brick, \$153,319; Lakewood, \$140,559; Toms River, \$183,933 Passaic County: Clifton, \$127,487; Passaic City, \$109,211; Paterson, \$236,050; Wayne, \$111,287 Somerset County: Bridgewater, \$116,802

The Burlington County Occupational Training Center received \$185,637, and the Atlantic County Utilities Authority received \$144,928 for their recycling efforts.

For a complete list of recipients, view this article on www.AmericanRecycler.com.

KAB and partners work to maintain parks during government shutdown

As national parks face issues with unmanaged waste during the government shutdown, Keep America Beautiful (KAB), the largest community improvement organization in the U.S., and Nestlé Waters North America, one of the leading beverage companies in North America, announced that they are teaming up to help mobilize affiliate organizations and volunteers across the country to clean up these shared public spaces.

This national effort will kick off on St. Simons Island in Georgia. The Keep America Beautiful local affiliate, Keep Golden Isles Beautiful in Brunswick, Georgia, has committed, with the help of more than 40 new volunteers added to their existing volunteer pool, to clean up and maintain trash and recycling container service at historic Fort Frederica National Monument and the Bloody Marsh National Monument during the government shutdown.

"The Keep America Beautiful national network of community-based

affiliates is committed to ending litter and ensuring our public spaces are beautiful places for all to enjoy," said Randy Hartmann, senior director, affiliate operations, Keep America Beautiful. "While our volunteers can't totally abate and remove the litter and debris that is amassing at our national parks and public lands during the government shutdown, our affiliates have offered their assistance in the communities they serve to support the parks during this time of need. We thank our partner at Nestlé Waters North America for supporting our efforts to help grow our volunteer base and contain the growing trash and litter at our national parks and public lands."

Other Keep America Beautiful affiliates are actively engaging national parks staff in their areas to provide support for cleanups as future needs arise. Nestlé Waters North America has generously offered resources, through financial donations and employee volunteers, to assist in these efforts.

Monahov joins Tydrolyte advisors

Dr. Boris Monahov, technical program manager for the Advanced Lead Acid Battery Consortium and considered to be the world's top independent lead battery science and technology expert, is joining Tydrolyte LLC's advisory board. He will advise Tydrolyte LLC on technical issues such as verification testing and

will help the company establish customer relationships. Dr. Monahov joins former EPA administrator Stephen L. Johnson on the advisory board that will assist Tydrolyte LLC in its mission to replace toxic sulfuric acid in the \$40 billion lead battery market with a better performing, non-toxic substitute.

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Plastics fuel

Continued from Page 1

value, co-mingled plastic waste, such as film and flexible packaging, into marketable petroleum blend stocks like fuels and wax.

According to Brightmark Energy, "This sustainable technology directly addresses an acute problem facing the U.S.: More than 91 percent of the 34.5 million tons of plastic domestically produced each year is not recycled. These products end up sitting in landfills for thousands of years or littering communities and waterways. We're excited to help bring an economically viable solution to the marketplace." The good news? RES Polyflow designs, manufactures and implements commercial-scale energy recovery systems that offer a responsible end-of-life solution for non-recycled waste plastic.

The RES Polyflow plastics-to-fuel process allows post-use plastics to be utilized in an environmentally friendly way, offering a productive end-of-life solution for this material

Located in Ashley, Indiana, the new facility will convert 100,000 tons of plastic waste into 18 million gallons of ultra-low sulfur diesel fuel and naphtha blend stocks and 5 million gallons of wax per year.

Benavides doubts the ban on plastic bags will affect PTF technology because other sources of plastic waste are available. "Based on the survey we conducted, most of the companies get plastic waste from industrial sources, agriculture plastic waste, and electronic industries," Benavides said. "The role of the recycling industry is very important. It can be a source of waste plastic that instead of ending up in the landfill, will be used to produce fuel and displace fossil fuel."

To further enhance the role of PTF as it relates to plastics recycling, companies are trying to use the technology of pyrolysis of plastic to produce products like petroleum-based products rather than fuel because of the economic value of products.

"Lubricants are a good example," Benavides said. "This technology can be used to produce lubricants which has higher economic value than fuel."

Argonne's analysis shows that PTF holds promise to produce ultra-low sulfur diesel fuel as a good waste management strategy. "The diesel fuel is as GHG intensive as conventional ultra-low sulfur diesel and likely less water-intensive," Dunn said. "PTF could serve as a promising complement to recycling in management of plastic waste and a viable alternative to landfilling."

Spokane signs contract with Rubicon

Rubicon Global, a provider of waste, recycling and smart city solutions to businesses and governments, disclosed that Spokane, Washington, has selected Rubicon in a competitive bid process for a new three year contract to provide smart city solutions to help benefit its citizens and businesses in 189,000 service locations across the city.

Starting in December, the City of Spokane began using the RUBICONS-martCity™ platform, which includes a tablet-based mobile app, a plug-in device and a web based portal. The technology will allow the city's solid waste collection utility to track key metrics, including service confirmations, missed pickups, landfill diversion and recycling rates, leading to more efficient operations and ultimately improved service for its customers and citizens. Rubicon's fleet management technology will be installed in the city's approximately 100 solid waste vehicles, and a vehicle telematics system also is available for the city's wider fleet of more than 1,000 vehicles.



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Events Calendar

February 24th-27th
The 32nd Southeast Recycling Conference & Tradeshow (SERC). Rosen Centre Hotel, Orlando, Florida. 800-441-7949
www.southeastrecyclingtradeshow.com

February 25th-28th
SWANApalooza 2019. Hynes Convention Center, Boston, Massachusetts. 800-467-9262 | www.swana.org

March 9th-12th
CDRA 2019. New York Marriott at the Brooklyn Bridge, Brooklyn, New York. 866-758-4721 | www.cdrecycling.org

March 11th-14th
Association of Plastic Recyclers Membership Meeting. Gaylord Resort and Convention Center, National Harbor, Maryland. 202-316-3046 | www.plasticsrecycling.org

March 20th-21st
Northeast Recycling Council Spring Workshop. Chase Center, Wilmington, Delaware. 802-254-3636 | www.nerc.org

April 1st-2nd
North American Waste-to-Energy Conference (NAWTEC). Hyatt Regency, Reston, Virginia. 888-744-1449 | www.swana.org

April 1st-3rd
Aluminum Association Spring Meeting, Belmont Hotel. Charleston, South Carolina. 703-358-2960 | www.aluminum.org

April 8th-11th
ISRI Convention & Exposition. Los Angeles Convention Center, Los Angeles, California. 202-662-8500 | www.isri2019.org

April 11th-13th
United Recycler's Group. Hyatt Regency Grand Cypress, Orlando, Florida. 888-874-3463 | www.u-r-g.com

Bengal acquires CM Recycling Equipment

Bengal Machine, the parent company of Schutte-Buffalo Hammermill, LLC (Schutte-Buffalo), has acquired CM Recycling Equipment Solutions (CM Shredder), a leader in tire shredding equipment manufacture and industrial shredding solutions.

The asset purchase of CM Shredder fits with Bengal Machine's strategy to combine world class brands in the size reduction industry into a fully integrated manufacturer offering complete, turnkey solutions across a wide range of industries and size reduction applications. CM Shredder will offer two brands to service the primary and secondary shredding markets: CM Tire Shredders and CM Industrial Shredders. Schutte-Buffalo will become Schutte Hammermill and will focus on its hammer mill, crusher, and lump breaker product lines.

"With the acquisition of the Columbus McKinnon shredder business and the combination with our Schutte Hammermill product lines, now under the Bengal Machine banner, our company has moved into an ideal position to become the size-reduction equipment supplier for nearly every market need – regardless of the products or materials our customers are working with," said Martin Berardi, chief executive officer of Bengal Machine. "The purchase represents a strategic opportunity to add significantly to our worldwide installation base and grow our capacity and scale."

NY DEC uses old bridge steel and concrete to expand artificial reefs

New York State Department of Environmental Conservation (DEC) Commissioner Basil Seggos announced that DEC's Artificial Reef Program deployed parts of the old City Island Bridge in the Bronx on the Hempstead Reef to enhance local fishery habitat as part of Governor Cuomo's initiative to significantly expand New York's network of artificial reefs. The state's program is designed to build a stronger, more diverse marine ecosystem and provide shelter for marine life off New York's shores in an effort to expand recreation and tourism opportunities.

"These concrete and steel bridge materials will enhance the local marine habitat and fishery populations, benefitting both anglers and divers frequenting New York's artificial reefs," Commissioner Seggos said.

The original City Island Bridge was built in 1901, crossed Eastchester Bay in the Bronx, and was decommissioned in 2015, after the replacement bridge was built. The state procured the bridge materials through a partnership with the New York City Department of Transportation and the Tutor-Perini Corporation, the contracting firm that deconstructed the old bridge and built the new overpass.

Under DEC guidance, the City Island Bridge project deployed a total of 47 concrete filled steel caissons measuring up to 34' in length that once supported the original bridge. These materials are similar to the Tappan Zee Bridge materials deployed on Hempstead Reef Initiative's earlier this year.



PHOTO COURTESY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION

"I thank both the NYC DOT and the Tutor-Perini Corporation for their collaboration in this project and in helping to secure these materials for an innovative and creative use that would have otherwise seen them end up in a landfill," Commissioner Seggos said.

With unprecedented, multi-agency coordination, recycled materials from the State Department of Transportation (NYS-DOT), New York Power Authority (NYPA), Canal Corporation and the Thruway Authority are being used to help develop New York's artificial reef sites.

Construction of New York's first artificial reef dates back to 1949, and the Governor's expansion initiative is the state's first coordinated effort to stimulate the full benefits of artificial reefs. The artificial reef expansion will increase the variety of reef habitat on these sites, expand the bio-

diversity of fish and crustacea, promote environmental sustainability and boost Long Island's recreational fishing, sport fishing and diving industries.

DEC manages the state's 12 artificial reefs, which include 2 reefs in Long Island Sound, 2 in the Great South Bay and 8 in the Atlantic Ocean.

Last May, the Governor announced the inaugural deployment at Shinnecock Reef, which included recycled materials from the Tappan Zee Bridge project, DOT, NYPA and Canal Corporation. State agencies began deploying barges of Tappan Zee Bridge materials and decommissioned vessels cleaned of contaminants. In July, deployments were made at Smithtown and Rockaway reefs, and deployments were made on Hempstead Reef and Moriches Reef in August. Additional materials were deployed to Fire Island Reef in October.

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EPA awards \$541,000 to Massport to replace diesel equipment at Boston Logan Airport

The U.S. Environmental Protection Agency (EPA) has awarded a \$541,817 grant to the Massachusetts Port Authority (Massport) to replace diesel powered ground equipment working at Boston Logan Airport. The grant is made available under a competitive national grant program administered by EPA with funding authorized by Congress under the Diesel Emissions Reduction Act (DERA).

EPA has also announced the availability of grant funding to implement projects aimed at reducing emissions from the nation's existing fleet of older diesel engines.

The Massachusetts Port Authority was awarded the EPA grant to replace 25 pieces of diesel powered ground support equipment with all-electric versions operating at Boston Logan International Airport. The equipment includes baggage tractors, belt loaders and push back



tugs. Since 2011, EPA has awarded a total of \$2,175,000 to Massport for projects to reduce diesel emissions at Logan Airport and within greater Boston. The EPA grant will be matched by a Massport contribution of \$622,221.

According to Massport, this grant will be utilized in conjunction with an FAA VALE grant Massport received this

fall to install eGSE (electric ground service equipment) charging stations as part of the Terminal B consolidation project. American Airlines has pledged to replace 115 pieces of existing GSE with eGSE over the next few years. Currently American Airlines has 32 pieces of eGSE at Logan, or 1 percent of their overall fleet. Logan wide, approximately

9.5 percent of the existing GSE fleet is electric.

EPA is seeking project proposals to implement projects aimed at reducing emissions from the nation's existing fleet of older diesel engines. EPA anticipates awarding approximately \$40 million in DERA grant funding to eligible applicants, subject to the availability of funds. EPA is soliciting applications nationwide for projects that significantly reduce diesel emissions and exposure, especially from fleets operating at goods movements facilities in areas designated as having poor air quality. Priority for funding will also be given to projects that engage and benefit local communities and applicants that demonstrate their ability to promote and continue efforts to reduce emissions after the project has ended. EPA anticipates releasing a separate Tribal Clean Diesel funding opportunity in late 2019.

Grants distributed to Iowa City for residential recycling carts

The Recycling Partnership has awarded a grant for residential recycling carts to the city of Iowa City, Iowa, bringing its support for residential recycling programs to over 900 U.S. communities, more than a quarter of the population.

The grant to Iowa City was awarded as part of the All In On Recycling challenge in conjunction with the PepsiCo Foundation. The challenge was started to make recycling easier for 25 million families across the country by providing them with the resources they need to recycle

more and recycle better. In addition to Iowa City, All In On Recycling is supporting upgrades to residential recycling programs in Red Wing, Minnesota, Vineland, New Jersey, Dickinson, North Dakota and five communities in Central Ohio. These communities join hundreds across the U.S. that have benefitted from The Recycling Partnership's recycling tools and resources.

The grant dollars will help Iowa City as they invest in expanding recycling services to 16,000 households. The city will

receive assistance from The Recycling Partnership to support the delivery of recycling carts to every household served by their curbside recycling program, along with a robust, customized public education campaign designed to help residents recycle better.

"Iowa City's commitment to deliver improved recycling access to their residents shows that cities across the country understand the tremendous value in wasting less," said Keefe Harrison, chief executive officer, The Recycling Partnership.

"We are grateful to our funding partners, including PepsiCo Foundation and their recent \$10 million commitment to the All In On Recycling challenge, which enables us to offer this important cart grant work. When we improve recycling, we create jobs by protecting the planet."

The Recycling Partnership estimates the All In On Recycling challenge will help the U.S. capture 1.9 million tons of quality recyclable materials over the next 5 years.

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Report finds toxicity in every U.S. carpet tested

A new report by Ecology Center (EC), Global Alliance for Incinerator Alternatives (GAIA), and Changing Markets Foundation (CM) revealed the presence of toxic substances in all 12 of the carpets tested that were produced and sold by the nation's 6 largest carpet manufacturers: Engineered Flooring (J+J), Interface, Milliken, Mohawk, Shaw and Tandus Centiva (Tarkett). Toxic chemicals detected have been linked to cancer, hormone disruption, respiratory disease, heart attacks, strokes, asthma and immune and developmental health problems in children.

The landmark study is the first of its kind to test the nation's leading carpet brands for specific toxic chemicals. The report also outlines proven strategies to better protect human health and the environment by designing healthier carpet, increasing product transparency, and enabling safer carpet recycling.

Most flooring sold in the U.S. is carpet. Carpets hold a 60 percent share of the U.S. flooring market, with 11 billion square feet sold per year. Of that, less than 5 percent is recycled, and less than 1 percent is recycled in a closed loop (*i.e.*, turned back into carpet). Over four billion pounds of carpets are annually dumped in American landfills or burned in incinerators – releasing deadly pollutants into the air, soil, and water. Carpet production is projected to grow 4.5 percent annually in the U.S. to 14.6 billion square feet by 2019, so carpet production, use and disposal will continue to have major

repercussions for human health and the environment.

“Toxics in carpets make our homes, offices and schools less healthy places to live, work, study and play,” said Jeff Gearhart, research director of EC. “Further, when carpet materials burn, as they did in California’s recent fires, the combustion of hazardous chemicals increase the toxicity of the air people breathe. By designing carpets without toxic substances, we can better protect human health and the environment, while making it possible to recycle them into new, safer carpet.”

The report detected Per- and Poly-fluoroalkyl Substances (PFAS) in half of all carpet samples tested (6 out of 12).

One carpet, sold by the largest U.S. carpet manufacturer Shaw, contained high levels of six different types of PFAS. There is a growing concern around PFAS, as they bioaccumulate and are persistent in the environment. In recent months, several cases have emerged where communities’ drinking water has been contaminated by PFAS; it’s estimated that 95 percent of people in the U.S. have traces of them in their blood.

Five carpets were found to contain phthalates, a type of plasticizer often used in PVC carpet backing. Phthalates have been shown to migrate from the carpet into the air people breathe. The Curtain Call carpet sold by J+J Flooring (a subsidiary of Engineered Floors) is marketed as an ‘eco’ product a due to

its high recycled content. However, testing revealed 20 percent of the toxic phthalate DNOP in the backing. DNOP is banned in children’s products at levels higher than 0.1 percent in California, as well as Washington and Vermont.

The Super Flor carpet sold by Interface was found to contain 3.1 percent 4-nonylphenol (branched) in its backing. This chemical is a hormone disrupting chemical, as well as a developmental and reproductive toxicant, and is classified as a Chemical of Concern by the U.S. EPA. The Super Flor carpet is widely used in affordable housing projects.


Results from earlier testing of carpets sold on the European market, published in October, detected no toxic substances in three carpet samples, including two carpets with recycled content. And only one European carpet tested for PFAS, compared to six US brands.

“The fact that a similar analysis found none of the specific toxic substances in three products sold on the European market shows it is high time for U.S. companies to clean up their act and start providing customers with safer, 100 percent recyclable carpets,” said Nusa Urbancic, Campaigns director of CM. “This is a formula that works: it boosts recycling rates by creating clean material streams, protects human health and the environment, and saves carbon emissions and other resources.”

“Considering America’s growing carpet waste crisis, municipal governments are rightly under increasing pressure to increase recycling rates. While we applaud California’s groundbreaking 2017 law mandating that 24 percent of carpets are recycled by 2020 much more needs to be done,” said Monica Wilson, associate director of GAIA. “We must fundamentally transform the carpet industry to minimize waste, including banning toxic substances from carpet and incentivizing the design of safe and fully recyclable carpets. Recycling cannot come at the expense of human health.”

The report builds on a recent Healthy Building Network study which highlighted the possible presence of 44 toxic substances in American carpets. The study recommends: the immediate phase-out of toxic substances in carpets; stronger federal and state regulations; and banning or restricting toxic chemicals in carpets just as they have been in children’s toys. Mandatory Extended Producer Responsibility programs should oblige carpet manufacturers to also be responsible for ensuring their products no longer contain toxic chemicals and can be safely recycled at end of life. And federal and state laws should mandate full disclosure of all carpet ingredients and additives to consumers.

Report findings were based on testing conducted by Vrije Universiteit Amsterdam, the Ecology Center and the University of Notre Dame.



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INDUSTRY PROFILE

A Closer Look

by Donna Currie

Vortex De-Pollution and Recycling Equipment

Nigel Dove • 303-900-4040

Vortex De-Pollution got its start in the UK when Nigel Dove (now the chief executive officer) was doing some work in the UK for a scrap company that was the precursor to Sims Metal Management. Dove explained that in 2004 the UK passed legislation for processing end-of-life vehicles. This led him to invent a closed loop system that drains gas and other fluids from cars and pumps the fluids directly into storage tanks.

His system received a brief moment in the spotlight during a National Geographic series called *Megashredders: Planes, Trains and Cars*. The series visited Sims and showed fluids being drained using Dove's invention.

As car recyclers in the UK were required to follow the 2004 law, Dove built more units. In 2005, he sold 50 in the UK, and it wasn't long before he thought, "The U.S. is the place to go." He realized there were a lot more cars being recycled in the U.S., and plenty of recyclers could use his machines.

He kept building his business in the UK, but in 2008 he went to an ISRI convention in the U.S. to gauge interest. He said he was "inundated with people" who stopped by his booth. "I decided we needed to be here," he said, so in 2010 he opened an office and developed products specifically for the U.S. market. "Everything was bigger in that product version, so the fluids would pump faster," he said. The systems were environmentally friendly and safe for users while they drained vehicle fluids.

Before long, someone asked for a platform version that would provide easy access to the top side of a car, and he designed that version of his machine.

Of course, much of what Vortex offers is customer driven. While the company provides standard equipment along with a variety of add-ons, they're always willing to listen to a customer's specific needs when it is necessary "to get a little bit fancy." Later, those needs might be revised to fit a larger audience.

"Once we've designed a machine, we put it on our offer list," he said, and Vortex begins to offer other versions as well.

Vortex recently built a machine that could process 500 catalytic converters per hour for a customer who required that volume. Later, they used some of the same technology to design a machine that could process 80 catalytic converters per hour and be affordable for people who might process 30 to 40 per hour. If a machine is not in stock, it can generally be built in one or two weeks.

"That's the best bit," Dove said, "designing and making systems that work well." Besides fluid recovery systems, he designed catalytic converter shears, as well as a machine that crushes wheels then eliminates tires so metal recovery is efficient. Dove said that the traditional way of removing tires from wheels is time consuming, while his system "breaks the rims" so clean aluminum is released quickly.

At first, Vortex systems were mostly sold to junkyards that removed fluids before scavenging the profitable parts, but "scrap guys were bidding less often on cars because they were experiencing less value recovery," Dove said. It wasn't long before auto shredding companies were buying Vortex systems so they could safely remove fluids.

One challenge Dove sees in auto processing now, is how "electric vehicles bring a whole new raft of issues" including "high voltage batteries that can kill you." Once the batteries are disconnected, the capacitors are still full of charge, so recyclers may need to learn new skills. "Battery recycling is going to be the new catalytic converter," he said, since it is important to recycle the rare earth metals involved.

While Dove enjoys the challenges of engineering new products and improving old ones, "getting everybody in the right frame of mind" is a little less pleasant. He said that there is that "enlightened guy that goes to shows" to learn about new environmentally friendly technologies, but there are other people who don't want to learn anything new. "A lot of them are under the radar," he said.

Vortex is a global company, they assemble all of their U.S. products in Denver, but the staff there is small – only five people do the work. "The manufacturing process is quite streamlined," Dove said. Parts are purchased from trusted suppliers, and the final assembly is done in-house.

Vortex machines are built to be easily maintained, and all parts are ready to ship if customers need a replacement. However, maintenance parts can also be purchased elsewhere, like the hoses that are all made with standard U.S. fittings "so you can go to a hose shop" for a repair part.

Besides selling their U.S. made machines and guillotine shears, Vortex also offers products sourced from outside the U.S., including an engine cracker and car and nonferrous balers. And while they're known for making drainage systems, Vortex also offers wire harness processors, alligator shears and more.



—Nigel Dove

ALTERNATIVE ENERGY

Largest network of solar powered electric vehicle chargers deployed in NYC

Fifty solar powered charging stations have been deployed across the five boroughs that power New York City's growing fleet of electric government vehicles. Known as solar carports, each station will charge vehicles using sunlight. These new carports, combined with 37 existing solar carports across the five boroughs, will give New York City the largest network of solar-powered electric vehicle chargers in the country.

Each carport can recharge up to three electric vehicles daily. In addition, the city currently operates the largest electric vehicle fleet charging network in the country, with 529 sites across the five boroughs. The city aims to add at least 100 additional chargers in the next two years. Two of those carports are slated to be installed on the campus of New York City schools, to help power electric vehicles used for student driver education. The city is investing \$3.3 million in these charging stations, which will be fully installed by spring 2019.

New York City has the largest fleet of electric vehicles of any municipal government in the country, an initiative that's part of Mayor Bill de Blasio's NYC Clean

Fleet plan. The plan, announced in December 2015, calls for the city to have 2,000 on-road electric vehicles by 2025. To date, the city has more than 1,700 electric vehicles in use across 28 of its agencies.

The full network of solar chargers will annually power fleet vehicles over 650,000 miles of emissions-free driving. These new solar carports will also enable zero emissions at the vehicle tailpipe and in the production of the energy. Each carport will offset half its cost through gasoline savings over its expected lifespan. In addition, these units offer critical emergency resiliency, serving as backup and mobile solar power generators and storage units in case of power loss or a storm emergency. The units require no installation of any type and can be moved by the City's flatbed tow trucks.

"Solar powered electric vehicle carports offer a vision of a zero-emissions transport future, zero emissions at the vehicle tailpipe and in the production of the energy," said Keith Kerman, DCAS deputy commissioner and NYC chief fleet officer.

Ares Management acquires three Texas wind farms

Ares Management Corporation announced that a fund managed by its Infrastructure and Power strategy has closed on the acquisition of three operating utility scale wind facilities in Texas from BP Wind Energy North America, Inc.

The acquisition includes 2 wind facilities located in the ERCOT West region – Sherbino Mesa 2 (145 MW) and Trinity Hills (225 MW) – and 1 wind facility located in the ERCOT North region – Silver Star (60 MW).

The assets have been in operation since as early as 2008 and will be repowered by removing existing wind

turbine generators and replacing them with new best-in-class technology from a different original equipment manufacturer – Vestas-American Wind Technology, Inc. The repowering will maximize the efficiency and performance, as well as extend their lifespan. The repowered assets are projected to achieve commercial operations in 2020.

"This transaction adds three flagship assets to the Ares portfolio and reinforces Ares' leading position as a value-added infrastructure investor in the renewable sector," said Keith Derman, partner and co-head of the Ares Infrastructure and Power strategy.

ABB technology helps SENA expand solar homes in Thailand

Over the past three years, ABB collaborated with Sena Development Public Company Limited, the listed real-estate development company, to pioneer the adoption of solar rooftops for residential projects in Thailand. Starting at Sena Park Ville Ramindra-Wongwaen, ABB technology is supporting Sena's installation of solar power systems for all villages and condominiums in Bangkok and vicinities.

With continued development of solar power solutions, ABB offers the transformerless single-phase inverters, UNO-DM-PLUS 2.0 to Sena, which can maximize the return on investment for

residential systems.

ABB was awarded this project by providing 350 ABB single phase string inverters with reverse power protection system, including training and technical support, to the customer.

With its compact and flexible design, these inverters will allow higher performance in a small space and enable integration with current and future devices for smart building automation. In addition, ABB string inverters are compliant with the zero power export regulation required by Metropolitan Electricity Authority in Thailand.

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STRIP-TEC MODEL 400 WIRE GRANULATOR
Includes pre-chopper. Great condition!



1995 MAC 24' CRUSHER
24' opening. Great condition.



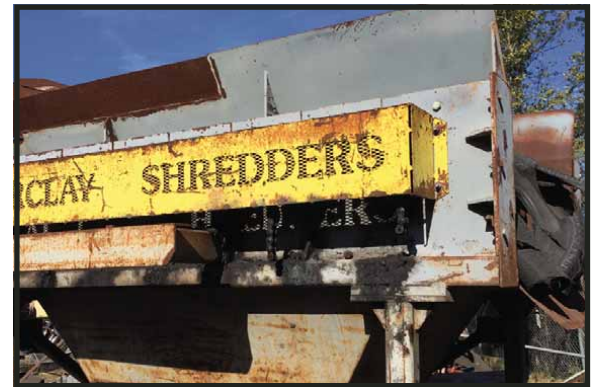
2005 JOHN DEERE 200LC
Includes a Genesis 300R shear!



2006 MAC 5200 BALER
16" x 16" x variable bale size.



BARCLAY 4.9 TIRE SHREDDER
Good condition. Recently rebuilt.



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2006 GRIZZLY



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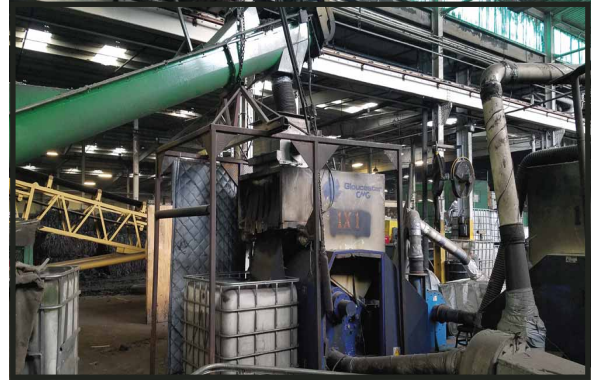
2012 DOOSAN DX255 WITH SHEAR

With Genesis GXP 400 R shear. Runs every day.



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Dual drum batch painting line.



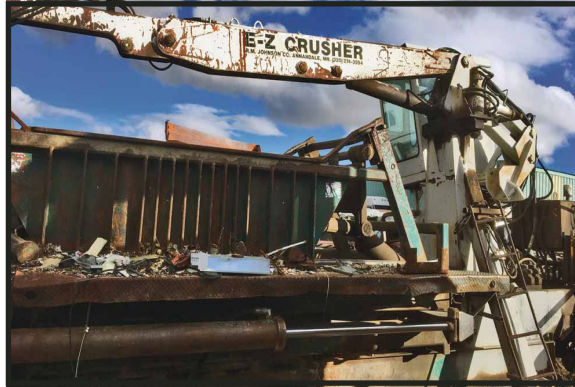
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7,200 hours. Has remote but needs new hand-held.

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METALS

U.S. Steel provides update on plant fire

A fire at U. S. Steel's Clairton, Pennsylvania, Plant resulted in significant damage to equipment and buildings, including units necessary for the safe and effective operation of the desulfurization process for coke oven gases. As described in reports filed with the Allegheny County Health Department (ACHD), U.S. Steel has been substituting natural gas and flaring coke oven gas in an effort to mitigate any potential environmental impacts.

U.S. Steel's investigation continues, but preliminary findings from out-

side experts engaged to investigate the fire and assess damage have revealed that the fire was likely caused by a mechanical failure. Due to the significant structural damage of the buildings, safety is paramount as authorities complete the investigation.

U.S. Steel is working around the clock to make the necessary repairs and to bring the facility back to normal operations. U.S. Steel remains committed to employing measures only after it is determined that it is safe for employees, contractors and the public.



A view of the control room damage at U. S. Steel's Clairton Plant, taken December 24, 2018. PHOTO COURTESY OF U.S. STEEL

Steel shipments up 5.6 percent

The American Iron and Steel Institute (AISI) reported that for the month of November 2018, U.S. steel mills shipped 7,832,092 net tons, a 4.2 percent decrease from the 8,174,754 net tons shipped in the previous month, October 2018, and a 5.6 percent increase from the 7,419,946 net tons shipped in November 2017. Shipments year-to-date in 2018 are 87,475,473 net tons, a 4.7 percent increase vs. 2017 shipments.

A comparison of November shipments to the previous month of October shows the following changes: hot rolled sheets, down 6 percent and cold rolled sheets, down 6 percent.

Steel import permit applications decreased in December

Based on the Commerce Department's most recent Steel Import Monitoring and Analysis (SIMA) data, the American Iron and Steel Institute (AISI) reported that steel import permit applications for the month of December total 3,563,000 net tons (NT).

This was a 12 percent decrease from the 4,069,000 permit tons recorded in November and a 2 percent decrease from the November preliminary imports total of 3,635,000 NT. Import permit tonnage for finished steel in December was 2,856,000, down 1 percent from the preliminary imports total of 2,878,000 in November. For the full year of 2014

(including December SIMA and November preliminary), total and finished steel imports were 44,205,000 NT and 33,589,000 NT, respectively, up 37 percent and 35 percent from the same period in 2013. The estimated finished steel import market share in December was 30 percent and is 28 percent for the full year of 2014.

Finished steel imports with large increases in December permits vs. the November preliminary included standard rails (up 177 percent), wire rods (up 74 percent), plates in coils (up 25 percent), cold finished bars (up 21 percent), hot rolled bars (up 14 percent), standard

pipe (up 13 percent) and wire drawn (up 13 percent). Products with significant year-to-date (YTD) increases vs. the same period in 2013 include plates in coils (up 91 percent), cold rolled sheets (up 88 percent), wire rods (up 85 percent), cut lengths plates (up 81 percent), heavy structural shapes (up 59 percent), sheets and strip hot dipped galvanized (up 57 percent), hot rolled sheets (up 45 percent), sheets and strip all other metallic coatings (up 41 percent), tin plate (up 30 percent), mechanical tubing (up 27 percent), oil country goods (up 21 percent) and reinforcing bars (up 20 percent).

In December, the largest finished steel import permit applications for offshore countries were for South Korea (340,000 NT, down 27 percent from November preliminary), Japan (215,000 NT, up 46 percent), China (197,000 NT, down 22 percent), Russia (187,000, up 434 percent) and Turkey (178,000 NT, down 3 percent). Through twelve months of 2014, the largest offshore suppliers were South Korea (5,370,000 NT, up 44 percent from the same period in 2013), China (3,161,000 NT, up 67 percent) and Turkey (2,189,000, up 82 percent).



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METALS

AWMI elects new leadership

The Association of Women in the Metal Industries (AWMI) held its 2019-2020 elections at its 2018 annual conference in St. Petersburg, Florida.

Elections were held for four two-year term positions, including president, vice president, marketing chair and mentoring chair. No regional director positions were up for election this year.

Sonya Malvick was elected president of AWMI. She is a 25 year veteran of the steel industry. Malvick followed in her father's footsteps and started her career working with him at Zalk Joseph Fabricators LLC, before moving into the steel service center industry where she held positions in inside sales, outside sales and general sales. She currently works as an outside sales representative for Olympic Steel Inc. based in Gary, Indiana.

Mary Wardle was elected as vice president of AWMI. She has worked in

the steel industry for more than 36 years and has held several positions within Steelscape LLC. She began her career in the company's accounting department and moved into the purchasing and inventory control division before settling into customer service and eventually outside sales. She is currently working as sales manager of Steelscape's western region and is based in Northern California.

Anna Tompkins and Sian Marcone also were elected as marketing chair and mentoring chairs, respectively. Tompkins is currently director of marketing at Rockville, Maryland based Atlantic Recycling Group, while Marcone is marketing manager at Pittsburgh-based Arconic.

AWMI is a volunteer-run organization dedicated to empowering women in metal industries.

Nucor acquires Precision Castings Company in Mexico

Nucor Corporation is acquiring Corporacion POK, S.A. de C.V. (POK), a fully integrated precision castings company with a facility in Guadalajara, Mexico. POK produces complex castings and precision machined products used by the oil and gas, mining and sugar processing industries.

"Our company has had a presence in Mexico for more than a decade. We know the market and the customers there. This acquisition supports Nucor's strategy in Mexico, which is focused on downstream processing for high quality, value added applications targeting niche markets," said John Ferriola, Chairman, chief executive officer and president of Nucor Corporation. "Expanding our capability to produce value-added products is a key component of our strategy for long term profitable growth."

POK produces a wide array of precision castings using steel, bronze, iron and specialty exotic alloys. Founded in 1894, POK has a long operating history and strong management team, which is a natural fit for Nucor's existing cold finish businesses and complements Nucor's acquisition of a cold finish facility in Monterrey last year. The acquisition of POK will enable Nucor to broaden its current product offerings and gives the company the opportunity

During class, my skydiving instructor would always take the time to answer any of our stupid first-timer questions.

One guy asked, "If our chute doesn't open, and the reserve doesn't open, how long do we have until we hit the ground?"

The instructor just looked at him for a moment and then in perfect deadpan quietly answered, "The rest of your life."

to increase sales into new and existing markets. POK currently employs 425 people at its Guadalajara production facility.

In addition to the Nucor ATP Mexico cold finish facility in Monterrey, Nucor's current Mexican operations include several sheet steel processing facilities as part of its Steel Technologies joint venture with Mitsui & Co., as well as a steel sales office. Nucor is also building a galvanizing line with its joint venture partner, JFE Steel Corporation of Japan, to serve the Mexican automotive market.

Noranda Alumina continues the expansion of Gramercy refinery

Noranda Alumina continues to expand the chemical grade alumina (CGA) capabilities of its Gramercy refinery with its commissioning of a 40 ton per hour Tornesh hydrate dryer and a dense phase pneumatic conveying system as the final phase of a CGA expansion project launched in late 2017. The Tornesh dryer and conveying system are new technologies for the Gramercy refinery, which now has the ability to produce up to 800,000 metric tons of CGA annually.

Construction on this \$20 million capital project began in November 2017, reaching its first milestone in April of 2018 with installation and commercial operation of a 65 ton per hour hydrate filter. Installation of the new hydrate dryer and pneumatic conveying system were completed in early December, with commercial operations starting this week.

"This new equipment, along with a new hydrate reclamation system, significantly increases Noranda Alumina's CGA capacity while improving our operational flexibility and efficiency," said John Habisreiter, the company's executive vice president. "The completion of this project enables Noranda Alumina to increase CGA supply without sacrificing total plant takeout," Habisreiter said.

What lies at the bottom of the ocean and twitches?

—A nervous wreck.

AUTOMOTIVE

Automotive leaders recognized

The Steel Market Development Institute (SMDI), a business unit of the American Iron and Steel Institute (AISI), presented three awards to outstanding automotive industry leaders who advocate for the use of steel in automotive applications. The award winners were recognized at SMDI's annual Men and Women of Steel Awards luncheon during the 2019 North American International Auto Show (NAIAS). The awards include a \$2,500 donation in honor of each recipient to the Society of Automotive Engineers (SAE) Foundation to help students, educators and corporations excel in STEM fields by providing educational programs and scholarships.

SMDI's Industry Innovator Award acknowledges an automotive designer or engineer who identifies industry challenges and implements new grades of steel as the solution. The 2019 Industry Innovator Award was presented to Joe Riggsby, principal engineer, upper-body design group, Honda R&D Americas, Inc. for employing more than 50 percent ultra-high-strength steel (UHSS) in the 2019 Acura RDX. The RDX also touts the world's first UHSS inner and outer door ring system.

The SMDI Community Hero Award recognizes individuals and organizations whose work using steel impacts the quality of life of the community. This year's Community Hero Award recipient is Carla Bailo, president and chief executive officer, Center for Automotive Research (CAR).

Under Bailo's leadership, CAR's objective materials research has been indispensable in driving industry innovation. Bailo has spent 35 years making an impact in the automotive industry and continues to be a prominent resource. Her extensive and well-rounded experiences leave an abiding impression on the auto industry.

The inaugural SMDI Manufacturing Leader Award is presented to an individual who implements steel for intended automotive applications and collaborates to overcome manufacturing challenges.

The 2019 Manufacturing Leader Award recognized Doneen McDowell for her exemplary leadership as manufacturing executive director of General Motors North America. McDowell has served in leadership positions in nine different GM plants covering stamping, assembly and powertrain. In 2015, she was recognized by Automotive News as one of the 100 Leading Women in the North American Auto Industry. With more than 20 years of experience in the automotive industry she encourages diversity in the workplace and serves as a mentor and role model to many in manufacturing.



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#1 Bundles	per gross ton	270.00	248.00	265.00	329.00	374.00
Plate and Structural	per gross ton	281.00	276.00	269.00	349.00	345.00
#1 & 2 Mixed Steel	per gross ton	225.00	258.00	245.00	248.00	303.00
Shredder Bundles (tin)	per gross ton	165.00	180.00	169.00	181.00	198.00
Crushed Auto Bodies	per gross ton	165.00	180.00	169.00	181.00	198.00
Steel Turnings	per gross ton	92.00	95.00	92.00	172.00	139.00
#1 Copper	per pound	2.69	2.52	2.54	2.60	2.43
#2 Copper	per pound	2.58	2.49	2.35	2.41	2.29
Aluminum Cans	per pound	0.70	0.70	0.68	0.68	0.54
Auto Radiators	per pound	1.69	1.60	1.65	1.65	1.58
Aluminum Core Radiators	per pound	0.68	0.72	0.59	0.49	0.43
Heater Cores	per pound	1.14	1.10	1.15	1.19	1.35
Stainless Steel	per pound	0.59	0.61	0.64	0.50	0.49

All prices are expressed in USD. Printed as a reader service only.

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SALVAGING Millions

by Ron Sturgeon
Autosalvageconsultant.com

Never forget that the customer is king

Carl Sewell says, "Customers are for life!"

Never forget the value of a customer. Certainly, a time comes in every business when you need to fire a customer. Here are some reasons I have had for doing so: They would not pay me; they were threatening an employee; or they were unprofessional.

Whenever you have to fire a customer, you always want to consider how parting company might affect you. Will you ever encounter them again? How will they take being fired? Are they so vindictive that they may try to harm your reputation online or with other clients? When you have to fire a customer, do it after having thought it out carefully.

One of my favorite books about the positive side of keeping customers is Carl Sewell's *Customers for Life*. Every business owner should read it and make sure every sales and service employee they have reads it.

My girlfriend Linda understands that business is about customer relationships. She has been with State Farm Insurance for more than 20 years and has been a State Farm Agent in Fort Worth for 6 years. Two times a week, a current client comes to her office and tells her that they intend to move their business to another carrier because of price. She is never defensive, always kind, empathetic and professional.

Linda listens carefully and is often able to keep those customers because she treats them with kindness and courtesy. By listening and empathizing, Linda is often able to get a client to sit down with her to compare the coverages and learn about the differences that produce the savings. Many appreciate that kind of service and decide to stay.

When she does lose a customer, Linda always asks for the opportunity to quote when they are up for renewal and some come back to her because she demonstrates that her interest in clients goes far beyond a transaction. Rate is just one of many factors when people choose to do business with her. It's also about the quality of service they get.

Good service is more rare than it should be. I recently had a disagreement with a service company. The service rep responded to my

complaint by telling me that no one else ever complained about their service. The implication was that I was being unreasonable.

Even if I were being unreasonable, what is the upside of responding to a complaint in a way that implies the fault is with the client? They told me that I was 100 percent wrong (there's always a second side to every story), and even said I was "spoiled." Even if I were, what did they gain by making the point, except my anger?

Then, they told me that I couldn't find anyone with their credentials and quality to do that job at the price I wanted. Ironically, they are a new business in a crowded niche. New or established, never be so pompous or naïve as to think you are the only one who can do the job. Then they wanted to discuss all that they did right on the job, rather than discussing the mistake or problem. Again, that isn't going to repair the relationship or keep the customer. Imagine your son telling you how he made almost all Bs as a defense when you confront him about a D on his report card.

I fired them very graciously. I promptly hired someone else to do the work. My new vendor is doing a better job for less money. Even though I liked the old vendor, they did not value the relationship with me or did not understand the basics of customer service, and acted on emotion when challenged. Worse still, they did not learn anything that might improve their service from losing my business.

I teach the client service employees at my companies to deal with customers by listening, empathizing, and acting to correct the issue. We spell out the steps that we will take to fix the issue and ensure that it does not happen again. We apologize and we fix it. We're about solutions that are win-win and strengthen the relationship with that customer.

Don't get caught up in thinking about one transaction. Keep your eye on the lifetime value of the customer whose issue you need to solve. What is all of his or her future business worth? What are the referrals that he or she could send you worth? Think lifetime value, not single transaction, and you will find it gets easier to keep customers for life.

AUTOMOTIVE

Gershow Recycling donates wrecked vehicle for safe driving education campaign



Kevin Gershowitz (behind podium), president of Gershow Recycling, addresses members of the media.

Gershow Recycling recently donated a wrecked car in support of the Town of Huntington's Anti-Drunk and Distracted Driving Campaign. Presented by Mark Cuthbertson, Councilman, Town of Huntington, and the Huntington Town Board, the program reminds residents of the dangers of drunk or distracted driving during the holidays.

Kevin Gershowitz, president, Gershow Recycling, took part in a press conference, along with local elected offi-

cial, law enforcement personnel and a local family who lost a loved one to a drunk driver. They urged everyone not to get behind the wheel if they have been drinking.

"There is no excuse of why you should be in a car under the influence, whether you are behind the wheel or you are a passenger with someone who is under the influence," Gershowitz said. "Just don't do it."

Honda Canada invests in hydrogen fueling station

Honda Canada Inc. entered into a joint partnership with Toyota Canada and Transition énergétique Québec that will invest in a hydrogen infrastructure project on the south shore of Montreal to be completed by the end of 2019. The expansion of hydrogen infrastructure in the province illustrates the company's commitment to expanding clean mobility options and reducing greenhouse gas emissions.

"For Honda Canada, this investment in hydrogen infrastructure is about supporting progress in clean mobility options," said Jean Marc Leclerc, senior vice president of sales and marketing, Honda Canada Inc. "In the short term, this investment will create an environment where we can continue to test our products and educate Canadians on the vast potential of hydrogen powered vehicles today knowing that mass adoption could take some time."

Led by its Blue Skies for Our Children philosophy, which centers around a concept of creating mobility products with the least impact on the environment, the last 50 years of Honda's environmental leadership consisted of moments where the company battled with convention to introduce new ideas that set benchmarks for innovation. Honda has continued to succeed in Canada by a steady cadence of technology investments that would move the company towards its global 2030 Vision and dream of creating a carbon free future.

Currently, Honda's fleet has one of the lowest overall greenhouse gas emissions in the industry attributed to its portfolio of low emission vehicles, led by both highly efficient internal combustion engines and hybrid powertrains, complemented by the recently launched Clarity Plug-in Hybrid.

Mutch named Adesa general manager

Adesa, a business unit of global vehicle remarketing and technology solutions provider KAR Auction Services, Inc., has named Kyle Mutch general manager of its Adesa Saskatoon auction.

Mutch brings a decade of sales and operations management experience to Adesa Saskatoon. Before joining Adesa, Mutch served as a distribution manager for Enerpac with manufacturing in more than 30 countries and sales operations in approximately 130 countries. His experi-

ence included managing the company's marketing. Mutch has also served in various sales positions at Fabco Plastics in Saskatoon, GF Packaging (formerly known as General Fasteners) and as a branch manager at Enterprise Rent-A-Car.

Mutch served on the Saskatchewan Water and Wastewater Association for four years as a board member focused on vendor relations. He organized the group's annual trade show for its nearly 200 vendors and 5,000 delegates.

Remember, only you can make BUSINESS GREAT!

This article was provided by autosalvageconsultant.com, which was formed in 2001 by recyclers for recyclers, to help them improve their businesses.

PAPER

AF&PA updates paper reports

The American Forest & Paper Association released its November 2018 U.S. paper reports.

Containerboard

Containerboard production was up 3.2 percent compared to November 2017 and up 1.9 percent year-to-date. The month-over-month average daily production compared to September 2018 was 3.4 percent higher. The containerboard operating rate was 96.0 percent, 1.4 percentage points lower than the same month last year. Production for export increased 5.2 percent from October 2018 and was up 0.9 percent year-to-date.

Printing-Writing Paper Report

According to the November 2018 Printing-Writing Monthly report from the American Forest & Paper Association, total printing-writing paper shipments decreased six percent in November compared to November 2017. Total printing-writing paper inventory levels increased three percent from October. Imports of printing-writing papers in October increased 27 percent compared to October 2017 imports, while exports declined 27 percent compared to October 2017.

•Net imports of coated free sheet (CFS) papers peaked in October, hitting the highest level in at least seven years. Shipments of CFS decreased just one percent year-over-year in November.

•U.S. purchases of uncoated free sheet (UFS) paper decreased five percent in November from the same month one year ago. Exports of UFS papers decreased 35 percent in October compared to October 2017.

•U.S. purchases of uncoated mechanical (UM) papers increased four percent year-over-year in November. U.S. shipments of coated mechanical (CM) paper; however, decreased 12 percent in November, while imports of CM papers increased 51 percent compared to last October. Exports of UM papers hit a new low in October, decreasing 75 percent compared to October 2017.

Boxboard Report

Total boxboard monthly production decreased 0.8 percent when compared to November 2017 but increased 1.2 percent from October.

The total boxboard operating rate was 96.3 percent for November. Total Solid Bleached Boxboard & Liner production was up 2.2 percent year to date; Recycled Boxboard production declined 2.2 percent year to date; and Unbleached Kraft & Gypsum rose 2.1 percent year to date.

U.S. Packaging Papers & Specialty Packaging

Total Packaging Papers shipments were essentially flat compared to November 2017 and up 2.8 percent year-to-date.

Bag & Sack shipments were up 5.3 percent year-to-date; Multiwall shipments were up 0.3 percent; Converting shipments were up 1.0 percent; and Food Wrapping shipments were up 2.5 percent.

The operating rate for November dropped to 89.5 percent compared to 95.6 percent in October. Inventories increased 7.1 percent since October but were 1.7 percent lower than the same month last year.

PLASTICS

Foam ban for businesses now in effect in New York

Starting January 1, 2019, New York City stores and food-service businesses can no longer offer, sell or possess single-use foam food containers such as foam takeout clamshells, cups, plates, bowls and trays. Additionally, manufacturers and stores may no longer sell or offer for sale loose fill packaging (packing peanuts) in the city.

This law was enacted because single-use foam items were found to be not recyclable and were collected as trash. There are many recyclable alternative packaging options including paper, plastic, aluminum and compostable products.

“Foam cannot be recycled, plain and simple,” said sanitation commissioner Kathryn Garcia. “It’s a problematic material when it’s in our waste stream. Foam is a source of neighborhood litter and it is hazardous to marine life. It’s a lightweight material that clogs storm drains and can also end up on our beaches and in our waterways. It’s even a contaminant in our recycling and organics programs. I’m thankful we are finally able to move forward with our ban and I look forward to seeing less foam in our waste stream.”

The ban began January 1, 2019 and there will be a six month grace period before fines will be imposed. The Department of Sanitation and other city agencies have worked to conduct outreach and educate affected business throughout the five boroughs.

Small businesses with less than \$500,000 in gross income for the most recent tax year and non-profits may apply for hardship exemptions from the Department of Small Business Services (SBS) if they can prove that the purchase of alternative products not composed of EPS would create a financial hardship.

Who is covered:

•For-profit or not-for-profit: food service establishments, mobile food commissaries, and stores that sell or use foam items, and

•Manufacturers and distributors of polystyrene foam packaging that are located or operate within any of the five boroughs of New York City.

What is covered:

•Single-service foam items including cups, bowls, plates, takeout containers and trays

•Foam loose fill packaging, commonly known as “packing peanuts”

What is not covered:

•Foam containers used for prepackaged food that have been filled and sealed prior to receipt by the food service establishment, mobile food commissary, or store

•Foam containers used to store raw meat, pork, fish, seafood or poultry sold from a butcher case or similar appliance

•Foam blocks used as protective packaging in shipping



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PLASTICS

Plastic bottle recycling proves resilient

Plastic bottle recycling declined slightly in 2017, slipping 3.6 percent to 2.8 billion pounds, according to figures released jointly by the Association of Plastic Recyclers (APR) and the American Chemistry Council (ACC). The 28th annual National Postconsumer Plastic Bottle Recycling Report indicates the overall recycling rate for plastic bottles was 29.3 percent, down 0.4 percentage points from 29.7 percent in 2016. The 5 year compounded annual growth rate was 0.1 percent.

Factors that contributed to the industry challenges included changing export markets and a 3.6 percent drop in material collected for recycling. Ongoing increases in single-stream collection also led to increased contamination of recyclables in the near term. In addition, growth in the use of plastic in bottles was offset by continuing progress in lightweighting and increased use of concentrates with smaller, lighter bottles.

In 2017, polyethylene terephthalate (PET, #1) bottles collected for recycling decreased by 27 million pounds. The collection of high density polyethylene

(HDPE, #2) bottles, which includes bottles for milk, household cleaners and detergents, fell by 70.3 million pounds (6.3 percent) to just over 1.0 billion pounds for the year. The recycling rate for HDPE bottles slipped from 33.4 percent to 31.1 percent.

Exports of HDPE bottles fell nearly 28 percent from 193 million pounds to 140 million pounds, or 13.4 percent of total HDPE bottles collected in 2017. The processing of recycled HDPE sourced domestically and imported fell by 31 million pounds in 2017.

“Plastic bottle recycling is proving to be resilient in the face of short term challenges,” said Steve Alexander, president of APR. “The recycling industry is responding in kind, with some investing in increased U.S. infrastructure, a clear sign of a positive long-term outlook. These investments underscore the need for continued consumer participation and convenient access to recycling programs.”

“Increasing plastics recycling is a critical part of moving toward a more circular economy, and commitments made across the value chain – from brand owners to plastics makers to recyclers – give

us good reason to be optimistic about the long-term prospects for plastics recycling,” said Steve Russell, ACC’s vice president of plastics. “Plastics makers in North America and Europe have committed to recycle or recover all plastic packaging by 2040.”

This year’s survey found the collection of polypropylene (PP, #5) bottles fell 15.2 percent to 31.1 million pounds, as the PP collection rate dropped to 17.2 percent. PP caps, closures and non-bottle containers are widely collected for recycling in the U.S., and these data are presented in a separate report on recycling non-bottle rigid plastics, which will be released in the coming months.

Together, PET and HDPE bottles make up 97.0 percent of the U.S. market for plastic bottles with PP comprising 1.9 percent, LDPE 0.7 percent and PVC 0.3 percent. Together, PET and HDPE comprise 98.8 percent of bottles recycled with PP comprising 1.1 percent.

Data on PET recycling referenced in the report were separately funded and published by APR and the National Association for PET Container Resources.

Chemistry sector commits to reducing plastic waste

The Chemistry Industry Association of Canada (CIAC) welcomed the announcement of a global alliance of companies in the plastics and consumer goods value chain committing US\$1 billion to help combat plastic waste in the environment.

Comprised of nearly 30 member-companies – including CIAC members BASF, Dow, Imperial Oil (via Exxon-Mobil) NOVA Chemicals and Shell Chemicals – the Alliance to End Plastic Waste (AEPW) has committed over \$1 billion with the goal of investing \$1.5 billion over the next five years to help end plastic waste in the environment.

The not-for-profit Alliance will develop and bring to scale solutions that will minimize and manage plastic waste and promote solutions for used plastics by helping to enable a circular economy. Working with the World Business Council for Sustainable Development as a founding strategic partner, the Alliance has developed an initial set of projects and collaborations which include partnering with cities to design waste management systems, collaboration with United Nations Environment Programme and funding the Incubator Network by Circulate Capital, among others.

Last June, the North American chemistry and plastics industries signaled their support for a more circular economy for plastics by announcing ambitious goals which will see industry do its part by ensuring 100 percent of plastics packaging is capable of being recycled or recovered by 2030 and 100 percent of plastics packaging reused, recycled or recovered by 2040. Achieving these goals will require shifts in resources, policies and behavior, as well as innovation from the chemistry sector.

“Unfortunately, nearly 80 percent of all post-consumer plastics in Canada end up in landfills mainly as a result of improper sorting, contamination and the limited diversion tools at our disposal. This represents a terrible waste of energy and precious resources,” said Bob Masterson, president and chief executive officer of CIAC.

When the printer type began to grow faint, a guy called a local repair shop where they informed him that the printer probably needed to be cleaned.

Because the store charged \$50, they told him to read the printer’s manual and try to do the job himself.

Pleasantly surprised by their candor, he asked, “Does your boss know that you discourage business?”

“Actually, it’s my boss’s idea,” the employee replied sheepishly. “We usually make more money on repairs if we let people try to fix things themselves first.”

Berry Global joins alliance to end plastic waste

Berry Global Group, Inc. has joined the Alliance to End Plastic Waste as a founding member. This organization is comprised of 27 companies and is making an initial 5 year, \$1.5 billion commitment to invest in solutions to eliminate plastic waste.

“This Alliance is different from other organizations in that it spans the value chain. Brand owners, plastic resin producers, chemical companies, converters like ourselves, as well as waste management companies and recyclers, all aligned towards a common goal of how we ulti-

mately end plastic waste,” said Tom Salmon, Chairman and chief executive officer of Berry Global Group, Inc.

In addition to the company’s efforts with the Alliance, Berry also partners with key organizations to encourage recycling as well as internal efforts to improve product recyclability and increase offerings with recycled content. As part of their efforts to end plastic waste, the company has pledged to prevent resin pellet, flake, and powder loss through their partnership with Operation Clean Sweep.

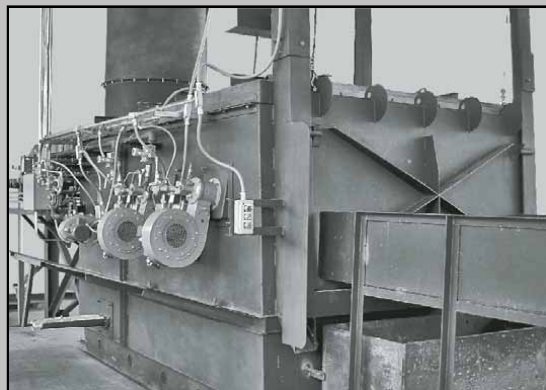
Berry is eager to collaborate to develop and deploy systems to better collect and manage post-use plastics in support of a more circular economy. As a whole, the Alliance will work with governments, multilateral institutions, companies, non-government organizations, and communities to support investments and drive progress over the next five years to end plastic waste.

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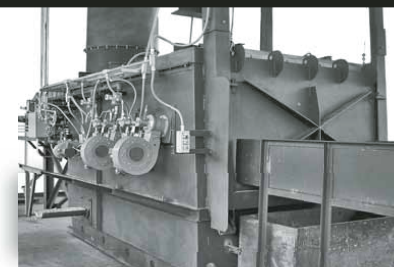
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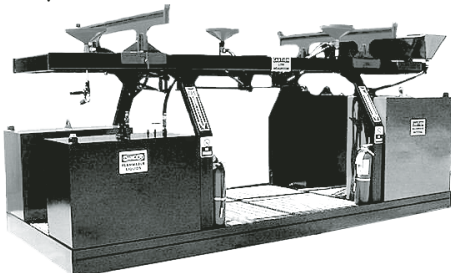
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BUSINESS BRIEFS

KAR names John Sibbitt to management team

■ KAR Auction Services, Inc., a global automotive remarketing and technology services provider, announced that John Sibbitt joined the management team of Recovery Database Network (RDN) as vice president of business development. RDN provides specialized software and data solutions to customers across the repossession and disposition value chain. Sibbitt has eight years of management, operations and asset recovery experience.

In his new role, Sibbitt will be responsible for managing current RDN client relationships, identifying opportunities for growth and expanding the client network.

Sibbitt previously served as vice president of operations at PAR North America, a U.S. provider of vehicle transition services with coast-to-coast solutions for recovery management, skip tracing, remarketing and title services – also a KAR business unit. Sibbitt was part of the team that launched PAR Platinum Compliance, the vehicle recovery industry's newest, most extensive compliance, due diligence and transparency tool. He managed all of PAR's vendor network, overseeing compliance and managing the relationships of more than 700 recovery vendors.

Before joining PAR in 2012, Sibbitt oversaw a large specialty portfolio for Liberty Recovery Services.

When I was a boy, I had a disease that required me to eat dirt three times a day in order to survive... It's a good thing my older brother explained it to me!

Bobcat now offers 2,000 hour warranty as standard

■ Bobcat Company has made significant changes to its standard and extended compact equipment warranty offerings.

Effective January 1, 2019, select Bobcat equipment purchased on or after January 1, 2019 are covered under a 2 year/2,000 hour standard warranty. The new warranty covers either 2 years or 2,000 hours of equipment use, whichever occurs first.

Equipment covered under the new standard warranty includes all Bobcat skid-steer loader, compact track loader, all wheel steer loader, and compact excavator models. Bobcat equipment purchased through December 31, 2018, will be covered under the 2018 standard warranty of 12 months with unlimited hours of usage.

In addition to the standard warranty updates, Bobcat Company is expanding its extended warranty offering with options out to 60 months and 5,000 hours of coverage.

Nippon Steel appoints Hashimoto as president

■ Nippon Steel & Sumitomo Metal Corp. has named Eiji Hashimoto as their new president.

Hashimoto will succeed Kosei Shindo as president effective April 1, 2019. Shindo will become the company's chairman.

Nippon Steel is currently the world's third largest producer.

Vortex realigns senior management

■ Vortex announced several reassignments within its senior management team:

Jeff Thompson will continue to serve as president, managing the company's daily business operations. He has been with Vortex since 2002.

Travis Young will assume the role as chief executive officer and will manage the strategic direction of Vortex, as well as other entrepreneurial investments made by the company's stakeholders. Previously, Young served as executive vice president of marketing & global strategy at Vortex, overseeing the company's marketing team. He has been with the company since 2004.

Brian Burmaster has been appointed senior vice president of global sales. He will oversee all Vortex sales, customer service, application engineering and product design activities, including those at the company's global offices in Europe, Central America and Asia. He has served as vice president of sales at Vortex since 2010. He has been with the company since 2006.

Cory Downing has been appointed senior vice president of corporate manufacturing & development. He will oversee all Vortex manufacturing and development activities, which includes supply chain management, engineering, new product development, special projects, and facilities management. This lends well to his previous experience as a plant & process engineer at Parker Hannifin for nearly eight years. Downing served as vice president of engineering at Vortex since 2007. He has been with the company since 2005.

Monty Leach has been appointed vice president of enterprise resource planning & standards (ERP). He will oversee the ERP and safety & standards teams. Leach has served as vice president of manufacturing at Vortex since 1986.

Eric Montoy has been appointed corporate marketing director and will assume oversight of the Vortex marketing team. He will report directly to Young. Montoy has served as corporate brand manager at Vortex since 2016. He has been with the company since 2012. Previously, Montoy served as art director at Leo Burnett, a globally active and industry-leading advertising agency based in Chicago.

Steinert adds new manager, waste materials

■ Steinert US, a leader of sorting and separation technology for the recycling and mining markets, has named Scott Jable as the new business development manager, waste materials.

Jable brings to Steinert 25 years of experience in the global recycling and material handling industries, with a focus on capital equipment consulting and system engineering/design.

Prior to joining Steinert, Jable's career included key roles at some of the top recycling, waste, and material handling companies in North America, where he was instrumental in establishing new territories and achieving significant revenue growth.

Morbark acquires Québec company Denis Cimaf

■ Morbark, LLC, has completed the acquisition of Denis Cimaf, Inc., based in Roxton Falls, Québec. This transaction represents the company's second acquisition since private equity firm Stellex Capital Management LP acquired Morbark in 2016. The acquisition of Rayco Manufacturing in October 2017, brought a lineup of innovative equipment into the Morbark family across multiple product categories. In particular, Rayco stump cutters, aerial trimmers, forestry mulchers and crawler trucks. The purchase of Denis Cimaf is another step in the company's strategic focus on broadening the range of tree care and industrial equipment, aftermarket parts, and service offered to their customers.

Founded by Laurent Denis and his wife, Monique Vaillancourt, in 1998, Denis Cimaf specializes in the development of high performance brushcutter mulcher attachments for excavators, skid steers, forestry tractors, graders and other types of heavy equipment. The company manufactures three main lines of products: the DAH series, industrial mulcher attachments for excavators; the DAF series, attachments for skid steers and other dedicated carriers; and the EWF series, dedicated hydraulic power packs.

Benjamin-Pierre and Simon Denis, sons of company founders, Laurent Denis and Monique Vaillancourt, will continue to lead the team to develop new products and help improve the company's existing product lines.

Morbark will operate Denis Cimaf as a new division maintaining its brand identity while the experienced management team will continue to manage its operations.

Doosan opens new parts distribution center

■ Doosan Infracore North America, LLC, a manufacturer of heavy construction equipment, is opening a new 100,000 sq.ft. parts distribution center.

Strategically located, the new parts distribution center allows Doosan Infracore North America to provide both dealers and customers with better service options, deeper inventory and faster parts delivery. The parts distribution center is located adjacent to the Doosan Infracore North America headquarters in Suwanee, Georgia, situated approximately 30 miles northeast of Atlanta.

The facility is designed for Doosan parts distribution and shipping. It is managed by DHL Supply Chain – the Americas' leader in contract logistics. The center will stock approximately 40,000 stock keeping units.

The parts distribution center will house a majority of Doosan parts, with only some low-volume parts needing to come from Doosan manufacturing facilities around the globe. DHL Supply Chain will provide outbound less than load transportation to Doosan equipment dealers located in the U.S. and Canada.



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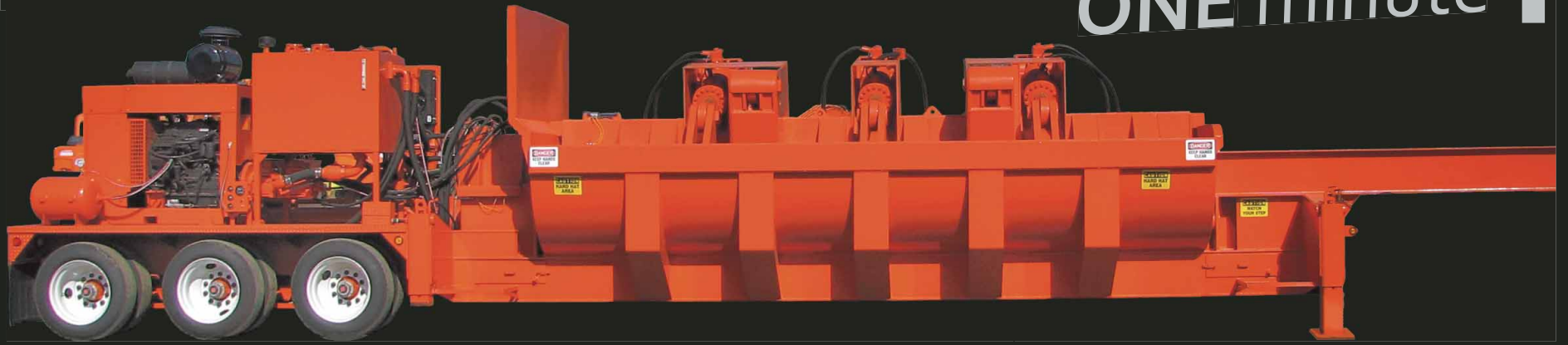
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Embracing technology: A smart waste solution

by MAURA KELLER

mkeller@americanrecycler.com

Never underestimate the power of staying connected. The new generation of technology solutions gracing the waste and recycling industries has taken hold. By combining the best features of data communications, drone technology, solar power and even cloud-based apps, technologically savvy waste management entities are finding themselves in an increasingly high-tech industry.

Looking at the waste and recycling industry, Phil Rodoni, chief technology officer at Rubicon Global, sees three big trends around the smart waste management evolution: the proliferation of Internet of Things (IoT) solutions for asset tracking, fill-level analysis and route optimization; smarter sorting with bins and devices that ensure items are put in the appropriate receptacle; and the expansion of diversion opportunities and maturation of networks to get materials to those facilities.

Rubicon Global is a technology company born in the category of the waste and recycling industry. Globally headquartered in Atlanta, Rubicon is a private company using tech for social good, to help turn neighborhoods into greener cities and smarter cities through solutions around sustainability, recycling and waste – all with a technology underpinning.

“With ‘single use’ selected as one of the key phrases of the year, rapid technological advancements are needed to enable the production of packaging that is recyclable and recoverable,” said David Rachelson, vice president of sustainability, Rubicon Global.

According to Kevin Haseney, a recycling expert and the district commander at JDog Junk Removal & Hauling Tampa, smart waste management is growing within the waste and recycling industry. An example of this trend is leveraging modern technical advances to develop new recycling solutions, like smart bins.

“Smart bins are highly advanced waste receptacles that have the ability to



Smart Bins have integrated technology that sorts, tracks, and compacts waste to increase efficiency. The bins can remotely notify waste management companies of data including when they need emptied. PHOTO BY MARIUSZ PRUSACZYK | DREAMSTIME

sort, collect and compact waste many times more efficiently than the traditional, everyday trash bin, Haseney said. “Using solar technology to power the device, a smart bin harnesses enough energy to run its other operative functions, such as the operation of a compactor, used to maximize the storage space within each bin.”

Another technological advancement Haseney is seeing is the utilization of a Wi-Fi operated system that notifies waste management systems when a bin is full and ready to be emptied. The benefits of this new process for waste maintenance include less fuel use and better time management for waste transportation.

“Ensuring that smart bins’ down time is at a minimum will prevent a full bin from becoming a deterrent to proper disposal,” Haseney said.

The team at 5280 Waste Solutions, a Denver-based waste management company that is using technology to streamline its own waste diversion and recycling percentages, has also created software that they make available to other waste management companies.

The team at 5280 believes the recycling and waste industry can’t have “smart” anything without a detailed understanding of the characteristics of every constituent part of the material flows beginning to end throughout the recycle ecosystem. “You also need comprehensive, high-level insight into the economic costs and benefits of the system working as a whole,” said Amanda Ladas, vice president of marketing at 5280.

5280’s sister company, Starlight, developed software for the waste management industry in two phases. Phase 1

is an integrated suite of mobile and cloud based apps that run live together over the Internet and touch, manage, collect data and optimize every aspect of a roll-off business. Features of these apps include customer mobile apps for ordering and payment, live inventory of containers, full billing system, centralized dispatch and smartphone apps for drivers that tie the entire system together.

As Ladas explained, Phase 2 builds on the detailed information gathered in the hauling software but adds a complete recycling management and tracking system that includes real-time material profiling and LEED reporting. Because the recycling system is integrated to the hauling system, contractors and even municipalities can have live dashboards and reporting that track diversion and

See TECHNOLOGY, Page B7

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SWANA and NWRA have varied responses to Bureau of Labor Statistics 2017 Industry Fatality Data

Two of the nations' leading waste and recycling industry associations have responded to a recent report on industry fatality rates, giving slightly different opinions on the matter. The Solid Waste Association of North America (SWANA) appears to be discouraged that their recent safety efforts did not reduce industry fatality more, while the National Waste and Recycling Association (NWRA) find the steady results as reason to continue with increased safety goals.

Despite this, both organizations acknowledge that refuse and recyclable material collection remains the 5th deadliest job in the U.S., a position it has held since 2013, and that the industry must make a concerted effort to keep workers safe on the job.

The U.S. Department of Labor's Bureau of Labor Statistics (BLS) released the 2017 National Census of Fatal Occupational Injuries last December showing similar results as the previous year. The data from 2017 indicates that rates have remained relatively steady with 30 fatalities in this occupation compared to 31 in 2016. The fatal work injury rate increased in 2017, however, from 34.1 to 35.0 per 100,000 full-time equivalent (FTE) workers. By

industry category, solid waste collection workers suffered 32 on-the-job fatalities, compared to 31 the year before.

The BLS data on workplace injury and illness is published annually, and information on the waste and recycling industry is based on the U.S. Census Bureau definition of the waste and remediation services industry as "solid waste collection, hazardous waste collection, other waste collection, hazardous waste treatment and disposal, solid waste landfill, solid waste combustors and incinerators."

"We are not surprised by the disappointing 2017 results, as SWANA tracks all worker and third-party fatal incidents in the U.S. and Canada involving the solid waste industry," said David Biderman, SWANA Executive director and chief executive officer.

"SWANA's preliminary data also indicates an increase in the number of worker fatalities in 2018, with nearly 50 solid waste employee fatalities recorded through December 15, 2018," Biderman said.

Deaths among landfill employees, which are part of the reported industry total, have decreased in recent years, from nine deaths in 2015 to six deaths in 2017. There were also four fatalities

among material recovery facility (MRF) workers in 2017. In 2016, MRF data didn't meet BLS publication criteria.

The release of the National Census of Fatal Occupational Injuries each year is a sobering reminder of the safety challenges that workers in the solid waste industry face every day. SWANA takes seriously its commitment to get waste and recycling collection out of the top 10 most dangerous jobs and wants to ensure all industry workers in the United States and Canada make it home safely each day.

"This should encourage our industry to continue its commitment to the organizational programs implemented over the past year to strengthen the culture of safety. The NWRA and our members won't stop looking for opportunities to improve and we will never accept any loss. Zero is possible," said NWRA president and chief executive officer Darrell Smith.

A variety of resources will help the industry reach that goal, including SWANA's new Hauler Safety Outreach program and the NWRA's "Slow Down to Get Around" legislation. Additional safety materials, workshops and conferences are helping spread the latest safety measures throughout the industry. These

programs are being implemented in chapters nationwide, with legislature already in place in 22 states.

Chad Grecsek, director of Recycling and Solid Waste Management and SWANA South Florida Safety Ambassador, said addressing industry safety is the responsibility of everybody in the industry. "To that end, the Florida SWANA Sunshine Chapter will be hosting a three-day Safety Matters symposium this March. This conference is being held in coordination with the chapter's annual Road-E-O event and will bring collection and facilities managers as well as public and private sector leaders together to tackle this very important issue. Sessions will focus on the latest trends, lessons learned and disseminate proven safety best management practices. Our best drivers with impeccable safety records will share their daily approaches to safety. The latest safety equipment and technologies will be also be discussed.

SWANA and the NWRA both urge the industry to improve its safety record. SWANA plans to release its own review and analysis of 2018 fatalities in the United States and Canada in early 2019.

Recycling rate skyrockets 80 percent after launch of FuTuRe pilot program

In the first month of its Fair Trash Reduction (FuTuRe) pilot program, the town of New Windsor, Maryland's solid waste decreased by 44 percent, and at the same time nearly doubled its recycling rate from 21 percent to 38 percent.

The pilot is the result of work by Carroll County and its waste reduction consultant, WasteZero, which the county hired to develop the FuTuRe program in 2017. The goal was to find practical ways to help extend the life of the Northern Landfill. Reducing the amount of material going in the trash saves money and mitigates risk for the county.

New Windsor launched the pilot on November 6th of last year. Results of the pilot indicate New Windsor has reduced

waste as predicted – residents are now generating nearly 50 percent less trash per capita than residents in other Carroll County municipalities. Expanding the program to the entire county would help decrease the need to ship waste out of state and reduce the requirement for additional regional incineration.

FuTuRe is designed to make residents more conscientious about what they throw away. Scott Graf, project specialist for the Carroll County Department of Public Works, said that he was pleasantly surprised to see that most residents now only put out one bag of trash per week.

One way to reduce waste and the need for multiple trash bags is to recycle

all that can be recycled. Residents are now recycling so well that the Town has gotten multiple requests for extra recycling bins, according to Gary Dye, New Windsor's town manager. Ecology Services, the Town's waste management contractor, is providing additional and larger bins to those who request them.

The county received recommendations from six reports over the last 20 years suggesting unit-based pricing to reduce the volume of waste, including a KCI study in 2015. County Commissioners decided to encourage the FuTuRe pilot in order to vet the concept.

The program design eliminates the tip fee to the town of New Windsor, which results in an annualized savings of over \$30,000. The disposal fee is then shifted to a bag fee, which gives residents control of their own trash costs. The concept of treating waste like a utility is common in the northeast where disposal costs are high.

By becoming a leader and taking a chance on FuTuRe, residents of New Windsor have a chance to change the landscape of disposal for the county and have a meaningful impact on finances and the environment for years to come.

NYC industry groups to realign

The National Waste & Recycling Association (NWRA) and New Yorkers for Responsible Waste Management (NYRWM) are in agreement to realign all of New York City's commercial waste and recycling service companies under the organizational structure of the NWRA New York City Chapter.

The realignment of NWRA and NYRWM is now possible by a combination of new national leadership of NWRA, and a resolution adopted by the NWRA NYC Chapter in May 2018 that endorsed maintaining the open-market system and rejecting Mayor Bill de Blasio's zone-franchising proposal.

"I am pleased that the entirety of New York City's waste services industry will realign with our New York City Chapter. Our industry is stronger when we work together. We look forward to supporting our new members and advocating for solutions affecting our industry," said NWRA president and chief executive officer Darrell Smith.

The goal of this realignment is to unify and strengthen the industry's voice and advocacy efforts on a wide range of issues of concern to the industry, principally the current debate over whether and how best to advance the industry's operations to meet the City's new environmental goals while maintaining the many benefits of the existing open-market system.

When completed, the NWRA New York City Chapter will represent more than fifty companies, most of which are direct service providers licensed by the City's Business Integrity Commission.

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For additional information on the FuTuRe waste reduction program, view this article on www.AmericanRecycler.com.

Freestate Farms breaks ground at compost facility in Northern Virginia

Freestate Farms LLC, an organic waste recycling company based in Northern Virginia, broke ground to begin construction of its new advanced aerobic composting system at the Prince William County Balls Ford Road Composting Facility in Manassas. Colesville district supervisor Martin E. Nohe (Prince William County Board), county executive Christopher E. Martino, and members of the county's solid waste division lent a hand to turn the first shovelfuls of dirt for the project.

In January 2015, Freestate Farms was authorized by Prince William Board of County Supervisors to construct and operate this new facility to process yard waste, food scraps and wood waste at the County's Balls Ford Road composting facility, and to provide organic waste management services at that site and at the county's landfill.

When the project is complete in 2020, it will double the processing capacity at the Balls Ford Road facility. Over 80,000 tons per year of organic waste will be

recycled into high-value compost, soil products, and non-synthetic fertilizers. This will reduce the amount of yard and food waste going into the County landfill, thus extending the life of the landfill, and Freestate will ultimately employ more than 20 people at the site.

The first phase of the new facility will involve advanced aerobic composting technology, designed and supplied by Engineered Compost Systems, which will speed up and optimize the composting process. The current system stacks yard waste into long passively aerated piles (called windrows) that are turned manually with heavy equipment to promote the composting process, which presently takes roughly nine months.

The new system will automatically control the flow of air through concrete aeration floors to maintain optimal aerobic conditions in the piles, which will minimize odor generation and speed up composting. Biofilters will further scrub potential odors from the exhaust air stream. This process will reduce the com-

posting time to three to four months and allow Freestate to produce higher quality soil amendment products.

The second phase of the project will involve construction of an anaerobic digestion system, which will process food waste in a fully enclosed airtight tank that is seeded with special microbes to "digest" (i.e., convert) food waste and other organic material, such as fats, oils and grease, into methane-rich biogas and high-quality fertilizer products. Freestate will use the biogas produced to fuel a combined heat and power generator to serve the entire Balls Ford Road facility, and which will have excess electricity available to send back to the grid.

The final phase of the new facility will be an indoor organic food production system. Freestate will construct and operate controlled environment containerized grow boxes to sustainably grow fresh produce using the renewable energy, with compost and fertilizer products all generated at the Balls Ford Road site.

NWRA signs agreement with MWRA

The National Waste and Recycling Association (NWRA) issued the following statement after signing a Memorandum of Understanding with the Michigan Waste and Recycling Association (MWRA) with quotes from NWRA president and chief executive officer Darrell Smith, MWRA president, and Terry Guerin, chair of NWRA's Services Board of Governors.

"I am pleased to sign this Memorandum of Understanding between our two organizations. It is often said that all waste is local. We look forward to supporting the Michigan association at the local level as well as communicating their interests at the national level," said NWRA president and chief executive officer Darrell Smith.

"MWRA is most excited to partner with NWRA to share knowledge and resources as we work together to find solutions for the complex issues facing our industry. We both look forward to continuing to advocate for solutions to issues affecting our industry seeking solutions that benefit our society and our environment," said Kevin Kendall, MWRA president.

"I am excited that the MOU has been signed. The implementation of the terms of this document will enhance the lines of communication between our two organizations. It's a timely event. We look forward to working with our new colleagues," said Terry Guerin, Chair of the NWRA Service Board of Governors.

Construction begins at North America's largest organic waste-to-energy facility

Anaergia Inc. began construction in the city of Rialto, California for the Rialto Bioenergy Facility (RBF). Rialto is approximately 50 miles east of Los Angeles, near the center of the Agua Mansa Industrial Corridor, an area zoned for heavy industry.

The RBF will help address two pressing waste management issues in Southern California: food waste diversion from landfills and biosolids management.

The RBF will convert 700 tons per day of food waste and 300 tons per day of biosolids into renewable natural gas, renewable electricity and Class A organic fertilizer. When construction is completed in 2020, it will be the largest food waste diversion and energy recovery facility in North America.

The Rialto Bioenergy Facility will provide the Southern California region a more efficient, local solution for the diversion of 300,000 tons of organic waste per year.

Using Anaergia's advanced anaerobic digestion technology to extract energy from the organic material, this facility will produce the equivalent of 13 megawatts of clean energy per year. The net carbon dioxide emissions reduction will be approximately 220,000 metric tons annually, which is the equivalent of taking 47,500 cars off the road.

Anaergia is building the RBF in collaboration with Waste Management, Republic Services, Southern California Edison, Anaheim Public Utility, Southwest Gas Utility, City of Rialto, the Sanitation Bureau of the City of Los Angeles, and the

Sanitation Districts of Los Angeles County and of Orange County.

The RBF is co-funded by the California Energy Commission, U.S. Department of Energy, CalRecycle, State of California and also incorporates private investment.

AR EQUIPMENT SPOTLIGHT

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EQUIPMENT SPOTLIGHT

Compactors

by **MARY M. COX**

maryc@americanrecycler.com

In the waste and recycling industry, it is always important to reduce disposal costs by reducing waste volume. Compactors are useful in that endeavor and there are many options available in the market that address the requirements involved with various settings found across industry sectors.

According to Mike Powell, account executive, the H Series compactors manufactured by Hoover Ferguson (HF) “are the newest products in a robust line.” Units feature a 316 stainless steel frame and can be ordered with multiple power requirement, air, and electric or explosion proof operation. The products can compact all types of non-hazardous waste. Machine component parts are sand blasted and painted and baling capabilities are available upon request. This product can improve incinerator efficiency and reduce operating time by compacting waste prior to incineration and reduce the volume of waste to be moved off location.

HF C-Series compactors with a 25 year track record are known for simple, safe and reliable operation while functioning as a compactor, baler or a combination of either type. Moving parts are completely enclosed to prevent injury and a hydraulic cylinder rolls back the machine compaction ram carriage for easy loading and unloading of compactor bags. These bags have weight ratings to 4,000 lbs. All types of non-hazardous waste can be compacted into durable bags and a slow release door provides easy bag removal.



Hoover Ferguson

Filter/can/glass crusher, food grinder and shredder attachments are available for this product.

The Marine Green compactor segregates and compacts solid waste material into wheeled carts for recycling and convenience. The machine’s structure is enclosed for compaction operations and

carts are provided with a positive lock in restraint system and a gradual release latch, for securing the cart into the compactor or to a bulkhead. No ramps are needed for placement and removal of carts, which are not subject to wheel compaction force.

Hoover Ferguson’s recycling compactors process materials such as aluminum, paper, cardboard, tin, and PETE plastics, which are separated at the source and moved into disposable bags, utilizing multiple compaction chambers on a rotating table. The machine’s total footprint is enclosed with drip pan and drain plugs and the woven polypropylene bags contain material. Also available — an optional food grinder attachment or filter crusher.

All of the above machines meet and exceed International MARPOL 73/78 Annex, are ABS approved and bags are manufactured to a 5:1 safety ratio.

The firm’s Enviro Pak 4000HM waste compactors can reduce hazardous waste disposal costs up to 90 percent. Compactors use up to 60,000 lbs. of force to compact into industry-standard, UN/DOT approved, 1 cubic yard, corrugated disposable shipping containers. These hazmat boxes can hold up to 2,500 lbs. and are rated for Packing Group I, II and III. The 4000HM was engineered to direct the force of the compaction directly to the walls of the compactor to eliminate distortion of the container and ensure total confinement of the compacted product. The filled container is removed with an eject system that can be manual or automatic. If there is a danger of airborne dust, these units can be outfitted with a HEPA and or a HEGA system.

K-PAC™ is a leading producer of stationary and self-contained solid

waste compactors that will fit nearly every commercial and industrial application. With dealers located across the country and a reputation for crushing “anything thrown its way, K-PAC has established itself as a leader in the waste compaction industry. The product lines range from solid waste/cardboard compactors to heavy industrial waste compactors, with varying sizes, that make them a good fit for any environment,” Brandon Schirmbeck, sales, said.



K-PAC Compaction Equipment

The K-PAC self-contained solid waste compactor lineup includes:

- KP1HT and KP1SC compactors – Both are self-contained compactors with a one cubic yard loading chamber.
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- The K-PAC stationary solid waste compactor lineup includes:
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 - KP2 Series “Stubby” – The KP2 Series is affectionately called “The Stubby.” The overall length of the 71” machine enables it to fit snugly against any structure.
 - KP2SH stationary compactor – The KP2SH Series is suitable for small industrial applications such as hospitals, retail and food stores that must

See Compactors, Page B6

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NUST MISIS: The world's first metallurgical furnace for man-made waste recycling in Russia



The processing of man-made waste and the production of iron in the innovative furnace has the potential for reducing the 130 billion tons of accumulated waste in Russia and even more worldwide.

PHOTO COURTESY OF NUST MISIS

The pilot installation of the world's only metallurgical furnace capable of processing iron-containing industrial waste as well as solid waste, simultaneously smelting up to 16,000 tons of metal per year, producing electricity and not harming the environment was launched in December 2018 in Russia's Oryol Region. The furnace has been designed and built by the scientific NUST MISIS group together with the industrial partner Vtoraluminprodukt Company.

According to the latest research, more than 130 billion tons of waste has accumulated in Russia – it equals 800 tons or 20 full cars per person. Moreover, more than five million tons of iron-containing industrial waste annually are being added to them in ferrous and non-ferrous metallurgy, and chemical industry. They are stored at landfills and are not being recycled since it is technologically or economically impossible and environmentally dangerous.

The scientific team of NUST MISIS led by the director of the Innovative Metallurgical Technology Scientific and Educational Center, Ph.D. Gennadiy Podgorodetskiy, together with the industrial partner of the university, Vtoraluminprodukt company, have built and launched a pilot plant bubbling reactor (based on the gas flushing principle), which has no analogues in the world. This system can fully process industrial waste, slags and sludge, as well as carbon-containing wastes, including MSW. It is also efficient and environmentally friendly in the production of iron and concentrate nonferrous metals.

Nikolay Shchenchenko, member of the Expert Mining Committee of the State Duma of the Russian Federation for industry and innovation, chief executive officer of "Resmet" explained, "The advantage of this technology is that it is non-waste and allows for simple, reliable and environmentally friendly purification of the exhaust gases. And it

also allows combination of the processing of metallurgical waste, coal preparation factories and municipal waste of enterprises or settlements that are heated with coal. So, it is a sort of a universal technology."

As noted by specialists, this furnace can become the new Kalashnikov Gun for Russia – *i.e.*, a unique technology that has no analogues abroad and will be exported worldwide.

Takhir Galiullin, the chairman of "Russian Steel" explained the usefulness of this type of plant saying, "This technology can be replicated. The developers consider it a third-generation technology, that is already more perfect and efficient than the previous ones. There is a future for such a plant, because there is something to recycle. There are greasy ocarinas, slag, dust, gas cleaning, *i.e.* by-products in metallurgy, and the processing is always relevant. It is necessary to build it in regions of large metallurgy, so that logistics is less expensive."

As noted by the developer Podgorodetskiy, the technology is unique – no one in the world has done anything like this yet. The prototype's trial launch attracted business, representatives of metallurgical and chemical companies such as Severstal, EuroChem and Mechel.

The most important advantage of the developed technology is low specific energy costs: 20 to 30 percent lower than the best world analogues. From this point of view, it can qualify for the European nomination BAT (Best Available Techniques – the best existing technologies). In general, the technology is initially environmentally oriented. The amount of emissions in the furnace is significantly lower than that of the world's best analogues, in addition, it provides for the suppression of the formation of particularly dangerous ecotoxicants.

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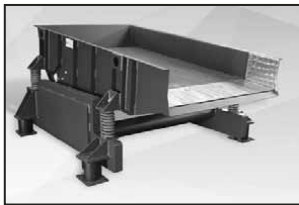
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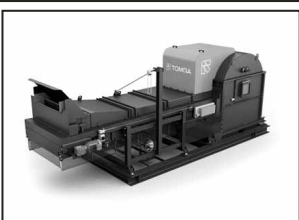
EPIROC EXTENDS COMBI CUTTER ATTACHMENT OFFERING

Epiroc has added two new models to its Combi Cutter range. Designed for carriers in the 20 to 30 ton and 25 to 40 ton operating weight classes respectively, they offer a productive combination of short cycle times, easy handling and simple maintenance.

They are robust, multi-purpose machines offering low noise, low vibration operation and suitable for practically any kind of primary demolition work. The cutting blades on all versions are replaceable and reversible and the attachments can be equipped with different sized jaws.

Both are available with two jaw versions, the universal and the steel cutting version.

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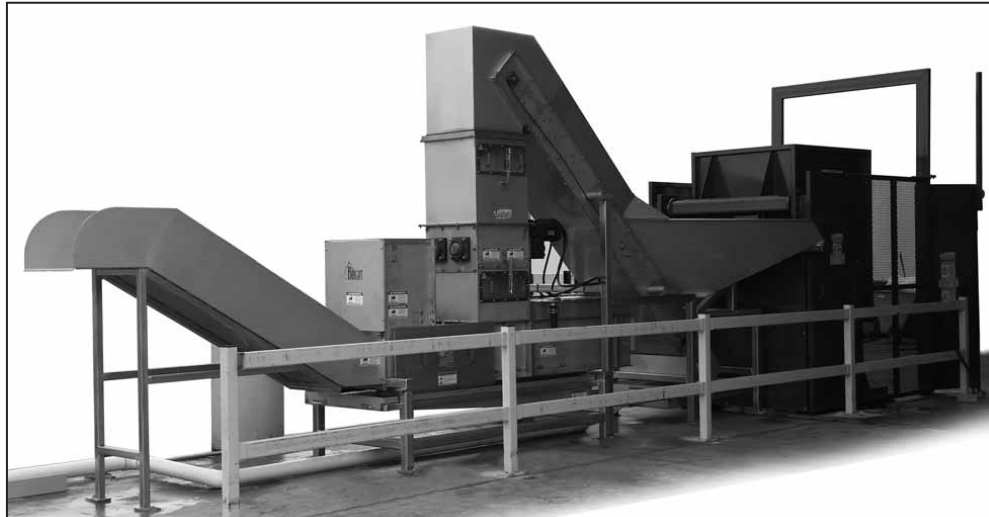
The new generation of X-TRACT machine has advanced sorting technology that allows a broader market to boost purity levels. It features innovative Dual Processing Technology to enhance final purity levels; multi-density channels for more precise classification and sorting of materials; and a broad range of application packages.

Design advancements on the new machine make it possible for X-TRACT to be configured in five application packages: e-scrap, organic, wood, aluminum and high-power-pack. Application packages can be configured for the user's individual needs and material flow.

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Compactors

■Continued from Page B4



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•KPV Versa Pac – A new breed of compactor that works seamlessly with front-load, rear-load and roll-off systems and can accommodate to sites of any size.

Since 2008, K-PAC has been a sister company to premier refuse truck manufacturer New Way®.

Most of the compactors manufactured by Sebright Products are custom designed for specific industry, facility or application requirements. According to Jean Bolt, marketing director, "We've seen a large increase in orders for specialty compaction equipment within the full container recycling arena, such as dairies or beverage manufacturers, as well as the food waste to feed stock recycling world. We recently received orders for more than 1.5M units that will be used for food recycling applications and have seen a 45 percent increase in sales overall, compared to previous years. We also design and manufacture compaction equipment in stainless steel and to customer specs for use within

a food processing facility. Our engineering and design teams work closely with facility engineers to create 3D drawings and insure our products integrate seamlessly with existing scales and internal systems.

"We also provide our own installation teams. These experts are known for safe, efficient, and fast installations, whether for a simple or complicated project. From high rise apartments to transfer stations, recycling facilities to food manufacturers and processors — and pretty much everything in between, we can provide a custom compactor to make recycling or waste disposal more efficient. We've manufactured industrial compactors since 1982. With more than 10,000 units sold, our reputation has been earned. Sebright equipment is known for a low lifetime cost, due to less maintenance and service costs. Our focus is to always build a product that meets a customer's operational and fiscal goals. By June, our latest plant addition will be complete, allowing us to more than double our production capabilities."

Fulcrum targets NW Indiana for next waste-to-fuel plant

Fulcrum BioEnergy has selected Gary, Indiana for the location of its Centerpoint BioFuels Plant, which will convert municipal solidwaste into low-carbon, renewable transportation fuel.

"Launching our business in Indiana is an important next step in expanding Fulcrum's capabilities to new cities rich in innovation and opportunity," said Jim Macias, president and chief executive officer of Fulcrum. "Fulcrum's municipal solid waste-to-fuels process will help reduce the impacts from climate change and boost the economy by producing low-carbon transportation fuel as well as bringing high-paying jobs and investment to northwest Indiana."

Construction is expected to begin in 2020 and will take approximately 18 to 24 months to complete. Once operational, the Centerpoint plant will divert and process approximately 700,000 tons of waste from the greater Chicago area.

The plant will process the waste, which will be converted off-site into a prepared feedstock, and will produce approximately 33 million gallons of fuel annually.

Centerpoint will deploy Fulcrum's proprietary process which reduces greenhouse gas emissions by more than 80 percent when compared to conventional fossil fuels and will generate hundreds of jobs in the region, creating 160 full time permanent jobs and 900 construction jobs.

Fulcrum's Centerpoint plant will be the company's second waste-to-fuels plant. In late 2017, Fulcrum began construction on the Sierra BioFuels Plant located near Reno, Nevada. When the Sierra plant begins operations in early 2020, it will be the first commercial scale waste-to-fuels plant in the United States.

"The attraction of new businesses that provide an entrée into new sectors has been a focus of our economic development team," said Mayor Freeman-Wilson. "Our objective is to create jobs while raising the city's assessed valuation. With a significant capital investment and noteworthy job creation, Fulcrum is a great example of the success of these efforts. This does not happen without the commitment and investment from Governor Holcomb and our partners in state government. We all understand that when Gary wins, Indiana wins."

Technology

■Continued from Page B1

recycling rates in detail by specific jobs, locations, material types, recycle destinations and re-use categories.

“5280 Waste Solutions is the ‘test bed’ for all new Starlight software developments,” Ladas said. “We have recently seen major C&D recycling centers moving toward the Starlight model, including Broad Run Recycling in Fairfax, Virginia. The benefits include streamlined operations, much higher accuracy and efficiency for material profiling, diversion tracking and customer recycling reporting.”

Indeed, Joe Steiger, channel sales manager, North America, at Trimble-Loadrite agrees that diversion rates are an important element in refuse tracking, including cost per ton of operation. These on-board weighing systems allow the operator to track data for the various types of material collected.

Trimble Loadrite weighing systems measure the weight of a waste dumpster being front-loaded into a garbage truck.

As Steiger explained, this weight (and the total for a run or day) can be uploaded to the Trimble InsightHQ cloud-based platform and/or ported to the onboard routing/dispatch systems on most fleet software.

This allows for weight tracking per customer or date or any other perimeter set by a waste company to analyze their fleet performance.

“Trimble Stratus is a cloud-based software platform that takes drone survey data, builds a 3D model and presents that data in an easy to use format allowing clients to monitor material movement and calculate volumes,” Steiger said. “And our VisionLink Landfill is a cloud-based dashboard with querying tools that give the back office visibility into airspace consumption and utilization in landfills.”

VisionLink Landfill tracks the compaction efforts of compactors equipped with machine control, and calculates the waste volumes placed and the compaction densities achieved in active cells

to optimize compaction and maximize landfill life.

“On-board weighing systems are available from only a small amount of manufacturers and route management, weight data and invoicing systems can be sourced from an even smaller group of partners specializing in waste management,” Steiger said. “Trimble has partnered with several of the route dispatch software companies to integrate our payload specialty into their software to include the invoicing feature capabilities on some.”

One advantage of on-board weighing is the ability of the haulers to compare what the customer contracted for and the real weight of the refuse being tipped.

“When the end-user is overfilling a container, the hauler is paying out of pocket for the excess weight at the transfer station/landfill, which is very costly to the hauler,” Steiger said. “This payload data, automatically collected, can make a haul much more efficient in operation and when bidding for contracts.”

In addition, today’s on-board, dynamic weighing systems can operate in the background, with very little input from the vehicle operator, so the driver is not distracted from his/her principal tasks.

Landfill Monitoring

As a worksite mapping and analytics company, Propeller Aero makes software for high-accuracy GPS drone surveying, helping landfills monitor cell progress and fill rate. Back in 2014 Propeller saw an opportunity for commercial grade drones to provide survey-grade data to worksites that would help teams better understand the status landfill.

Compaction rates are a main metric of landfills and Propeller’s technology calculates remaining airspace of a specific cell or the entire landfill while also producing a 3D survey of a site today compared to its top-of-waste design. Knowing the remaining airspace and where may have been overfilled lets landfill managers track overall progress and see productivity for a given period.

According to Rory San Miguel, chief executive officer of Propeller Aero, with teams now flying their sites more frequently, they’re building up a visual his-

tory of the landfill. This timeline and 3D visualization makes changes easy to spot, letting them see and measure settlement over time and place and identify if one part of the landfill settling faster than the rest. They’re also able to manage volumes by comparing volumes in active cells from one survey to the next.

“Surveying is an irreplaceable part of waste management, but it can be time consuming and costly, and, depending on your operations, infrequent,” San Miguel said. “One of the largest trends in ‘smart waste management’ today is leveraging drone-mapping and analytics technology to collect all types of site data in new ways with more precision, and using platforms to analyze that data.” This boils down to making data-driven, informed decisions to keep operations cost-effective and running optimally. Up-to-date and accurate data are required to effectively manage cell volumes, see how much is going in on a weekly or monthly basis, and ensure the best compact rates possible.

As San Miguel explained, the first priority on any landfill is safety, from everyday safety plans to inspections to traffic management. These things take time and resources to get right, and they are mandatory, so any opportunity to trim man hours off these tasks has a big draw, and because the surveys are accurate and up-to-date, the need for in-person inspections are decreased, or sometimes eliminated.

“Another major benefit we hear from users is cost savings,” San Miguel said. “Even small alterations from haul road design can mean an increase in cycle times and fuel burn – not to mention falling outside of proper safety guidelines. The time, legwork and safety risk associated with monitoring and fixing those issues adds up. With drone imagery you no longer need to leave the office to troubleshoot any of it because the 3D survey allows you to check road widths or grades in one click. Again, teams can compare road grades and the like against design and standard safety requirements.”

Full Steam Ahead

While robotics and sorting technology continue to advance, in 5280’s opinion the bigger, more impactful strides are

about to take place in linking independent parts of the recycle system – materials, sorting, transportation, accounting, job site and contractor efficiencies and municipal reporting – together into a single workable ecosystem.

“We see two opportunities for recycling. We see the system-wide view as a transformation – you can’t optimize a system until you connect to the end points, understand and manage it from end to end in a ‘smart’ way,” Ladas said. “And we see new materials reprocessing technologies coming along to begin to make more end markets available for products harvested from the C&D recycle stream.”

Steiger stressed that the need for data will continue to drive the industry; the trend in tender proposals for refuse collection will feature requests for data around diversion, asset management, real-time equipment tracking. “Haulers will be looking for hardware and software solutions that validate their business model, reduce operating costs and enhance share value,” Steiger said.

Future technology advancements to watch for will focus on three key areas: autonomous vehicles, auto sorting bin technology and route economics. “Follow the development of self-driving freight vehicles for hauling trash between collection facilities and trash trucks,” Rodoni suggests. “Follow the development of auto-sorting bins – it’s only a matter of time before it scales to larger containers. And from a fleet data perspective, waste operators should be focusing on using data for improving route economics and enhancing fleet safety.”

According to Rodoni, in 2019 the increased adoption of artificial intelligence and deep learning techniques paired with IoT and edge computing platforms will usher in new level of understandings and capabilities in the waste and recycling industry.

“These technological advancements will help identify material as it is collected,” Rodoni said. “And it will optimally deliver it to the best possible end destination while at the same time enabling on-demand collection for consumers and waste generators.”

Pennsylvania is the 22nd state to enact Slow Down to Get Around legislation

Pennsylvania Waste Industry Association members, who represent the private sector companies that collect and dispose of municipal solid waste in Pennsylvania, were joined by the leadership of the National Waste & Recycling Association, American Automobile Association – Central Penn, and the Independent Waste Haulers Association to raise awareness of a new law to protect Pennsylvanians who work along our roadways.

NWRA member companies have been diligent in providing advanced safety training for drivers and those who hop-off the trucks to make collections.

Despite training industry workers, drivers who are distracted – or just going too fast – are a major hazard for waste collection workers.

A Slow Down to Get Around driver education effort will remind Pennsylvania

motorists to maintain a safe speed and pass vehicles – and the men and women who operate them – with due care and caution as they collect our trash, deliver our mail and provide roadside assistance. Pennsylvania joins 21 other states that have passed similar laws.

The new Slow Down to Get Around provision, part of HB 1414, was passed by the Pennsylvania General Assembly and signed into law on October 19, 2018.

The law, which went into effect last December, will require motorists approaching and passing a stationary solid waste collection vehicle to reduce and maintain a safe speed for weather, road conditions and traffic in order to proceed with due care and caution; and provide for the use and display of yellow strobe lights that can be seen by traffic in both direc-

House Bill 1414 provides for yellow and white lights for tow trucks, red lights for vehicles used by probation officers in the First Judicial district of Philadelphia, internal blue lights for privately-owned vehicles used in answering emergency calls, and internally mounted lights in certain fire police vehicles in addition to yellow strobe lights for solid waste collection vehicles.

“This new law is a big win for our workers and our industry,” said Gary Roberts, Executive director of PIWHA, the Pennsylvania Independent Waste Haulers Association. “We send men and women out each day to do the important work of keeping our communities clean. The Slow Down law will help make sure they return home safely to their families each night.”



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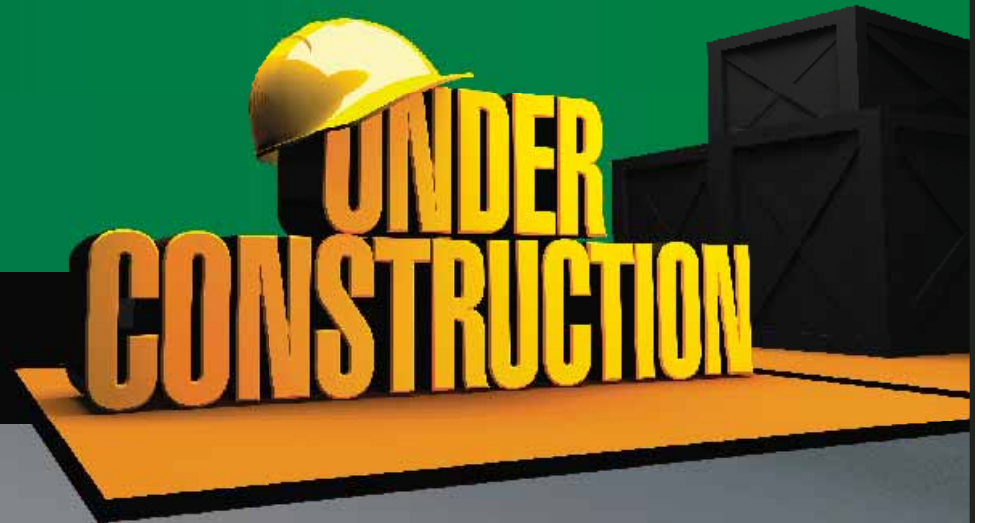
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