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NewsVoice of Salvage, Waste and Recycling

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FOCUS: Paper/Plastics

Paper and plastics recycling and the Chinese ban



WHAT'S INSIDE

- Plastics leaders rally for better recycling infrastructure priorities. Page A6
- Michigan awards 85 tire collection grants. Page A11
- Novelis Aluminum gives boost to electric taxis with lightweight parts. Page 14
- Subaru launches partnership with TerraCycle. Page B3

Events Calendar.....	4
A Closer Look.....	9
Scrap Metals MarketWatch.....	15
Salvaging Millions.....	16
Service Spotlight.....	18
Classified Advertisements.....	20
New Product Showcase.....	22
Equipment Spotlight.....	B4

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Copper recycling improves in a stringent environment

by MAURA KELLER

mkeller@americanrecycler.com

The last couple of years proved to be difficult for copper recyclers and scrap traders dealing with the metals market. But luckily, copper has seen a surge of sorts with increased demand in recent years due to the urbanization and industrial growth of China and India, as well as the worldwide surge in electronics and renewable energy sources. That said, the Chinese government's recently imposed tougher copper scrap import requirements may result in a tighter supply of more refined copper scrap.

According to Trevor Bergfeldt, PhD, vice president of operations and strategic development at emew Corporation, a company that provides clean technology solutions for environmental stewardship, metal recovery, energy efficiency and waste water treatment, as more and more copper is mined, the grade of copper deposits continues to decline, which consequently requires processing higher volumes of lower-grade material.

"All of this drives mine development costs up and puts pressure on the economic viability of these projects," Bergfeldt said. "For these reasons, copper recovery from secondary materials such as scrap, metallurgical residues and other waste materials are becoming more and more important in recent years."

As Bergfeldt explained, copper prices have always fluctuated, valued at less than \$1 per pound in the late 1990s/early 2000s, rising as high as \$4 per pound in early 2008 before the crash, and then rebounding to a high of \$4.50 per pound in late 2010/early 2011. In the past three years, prices have dipped from \$3 to \$2 per pound and in recent months have risen back to over \$3 per pound.

According to advisory services firm KPMG, 2017 was a strong year for copper, with prices enjoying gains of nearly 25 percent during the year. Early indications are that the market will swing into an undersupply position in early 2019



PHOTO COURTESY OF ROCKAWAY RECYCLING

but there is the potential for this to occur earlier. This means that copper prices should continue their upward trend in 2018, but this time in a more sustained manner.

"Demand for copper is expected to be quite bullish for the next few years owing in part to electric vehicles and renewable energy sources, which require more copper compared to their conventional counterparts. This makes for strong primary (mining) and secondary (scrap/recycling) copper markets," Bergfeldt said.

Impact on Recyclers

It's important to note that the primary and secondary copper markets are

not isolated from each other. Bergfeldt stressed that with today's industries striving for higher productivity, less waste and closed-loop processes, the primary and secondary copper industries will become even more interconnected.

"As primary resource grades decline, the scrap and recycling industries will play more integrated roles in the lifecycle of copper to enhance the overall sustainability of the industry," Bergfeldt said. "Even today there is overlap between the primary and secondary copper industries with nonferrous fractions from recycling of e-waste being processed at primary metallurgical facilities due to the infrastructure already in place to recover high-

See **AUTO IMPACT**, Page 4

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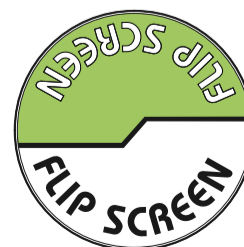


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GFG to expand global auto footprint with French bid

British-owned global industrial group, the GFG Alliance, has made a formal bid to save nearly 400 jobs in France with a plan to rescue and revive the only French manufacturer of aluminum wheels, AR Industries.

The 12,500 worker family-owned metals, energy and engineering group, headed by industrialist, Sanjeev Gupta, has submitted an official bid to the court administrators for AR Industries (ARI) at Châteauroux in the Centre-Val de Loire region.

GFG, which has a worldwide turnover of over \$12 billion, has put forward a comprehensive three year plan for the recovery of the struggling ARI business including investment in equipment, safety and quality improvements and enlargement of its customer base. This plan is based on GFG's track record for in industrial turnarounds.

The offer was made by GFG Alliance member, the Liberty Group, which is also currently purchasing Aluminium Dunkerque, Europe's largest aluminum smelter from Rio Tinto as part of a drive to establish France as a major operating hub for the group. The Dunkerque installation is already a major supplier of raw materials to ARI.

Liberty has a successful history in turning around troubled business. Linking a French metals business to a downstream auto manufacturing operation mirrors Liberty's track record in acquiring and restoring the fortunes of metals and vehicle component enterprises in the UK.

In doing so Liberty has won the confidence of major vehicle manufacturers such as Nissan, Jaguar Land Rover and Ford and secured long-term con-

tracts that have saved more than 2,500 skilled jobs in the UK auto sector and thousands more in the steel and aluminum sectors.

The acquisition of ARI, which produces wheels for Renault/Nissan and PSA, would dovetail with Liberty's construction of a two-million wheels per annum wheels factory next to its aluminum smelter in Fort William, Scotland. Liberty aims to supply UK vehicle makers with up to 25 percent of total domestic demand from the Scottish plant.

In keeping with its normal practices following the acquisition of industrial assets across the world, Liberty aims to protect jobs at ARI and initiate a growth plan for the site. If the bid is successful, the acquisition would be a major step forward for the GFG Alliance strategy to establish France as a key hub within its worldwide industrial network.

The expansion of the Group's stake in the international automotive sector follows the strong growth of its UK automotive business and its successful bid earlier this month for the 6,000 worker Indian based manufacturer Amtek Auto, which supplies gearbox and powertrain components to vehicle makers worldwide.

The wheels business at Chateauroux would be led by Philippe Baudon, who has around 30 years senior management experience within the metals and automotive sectors and a track record for turning struggling enterprises back to profitability. Philippe recently joined Liberty Engineering to lead the investment into downstream added-value production in France.

Union Partners joins Big River Steel in Arkansas

Union Partners, a full service metals and logistics operating company, disclosed plans to build a new steel processing facility on the Osceola, Arkansas campus of Big River Steel. The operations will be located directly adjacent to Big River's Flex Mill and will include both slitting and multi-blanking lines in a new build-to-suit facility expandable to 258,000 square feet. Construction will be on an accelerated schedule with a formal ground breaking in the first quarter of 2018.

Union Partners will install the latest innovations in technology and processes to enable real-time collaboration between their new operations and Big River Steel. The mill-grade equipment was selected to service the needs of Big River and its customers now and into the future, including the specific needs of the automotive industry which both companies are targeting. Planned expansions are already designed to seamlessly meet future needs as product development continues at the Big River mill that began producing steel just over a year ago.

"The Union Partners team is excited about our new opportunity alongside Big River Steel," said Union Partners founders Chris Hutter and Paul Douglass in a joint statement. "This collaboration will allow Union Partners to supply additional steel needs across the country, while maintaining our strong commitment to innovation. Our leading equipment and testing capabilities will only serve to further enhance the timely delivery of quality steel products into the marketplace."

In addition to complementary equipment and technology, Union Partners and Big River share an entrepreneurial approach to the steel industry. Both organizations view investment and innovation as critical to the future of American-made steel, and have built their companies to embrace leading technologies such as artificial intelligence (AI) and Industry 4.0. And customers are noticing, according to Mark Bula, chief commercial officer at Big River.

NWRA recognizes leaders for contributions

The National Waste and Recycling Association announced winners across three categories for contributions in support of the waste and recycling industry.

The 2018 awardees are: Members of the Year Award: Tony Cardamone, Concorde, Inc. and Robert Lee, Ecotech Waste Logistics; Chapter Leadership Award: William Keegan, Dem-Con Companies and David Pepper, Waste Industries USA, Inc.; Distinguished Service Award: Jeff Edwards, Evergreen Disposal, Inc., William Flower, Winter Bros. Waste Systems, Selin Hoboy, Stericycle, Inc., Ed Spinella, Law Offices of Edward F Spinella, Esq., LLC, and Larry Wiegman, Schaefer Systems International, Inc.

Members of the Year are selected based upon extraordinary service to the mission and goals of NWRA.

Chapter Leadership awards are presented to members whose contributions were particularly meritorious.

Distinguished Service awards are presented to longstanding members of NWRA who render service in pursuit of its mission and goals. The award recog-

nizes the highest spirit of volunteerism, personal integrity, professionalism and performance in an honorable and ethical manner.

Members of the Year

- Tony Cardamone, vice president of sales and marketing at Concorde, Inc.
- Robert Lee, owner/chief executive officer of Ecotech Waste Logistics

Chapter Leadership

- William Keegan, president of Dem-Con Companies
- David Pepper, vice president and director of capital projects for Waste Industries USA, Inc.

Distinguished Service

- Jeff Edwards, owner of Evergreen Disposal, Inc.
- Selin Hoboy, vice president of legislative and regulatory affairs for Stericycle, Inc.
- Will Flower, vice president, Winter Bros. Waste Systems
- Ed Spinella, law offices of Edward F Spinella, Esq., LLC
- Larry Wiegman, southeast regional sales manager, Schaefer Systems International, Inc.

"City Hospital," the receptionist answered.

The person timidly asked, "Is it possible to speak to someone to find out how a patient is doing?"

"Yes," said the receptionist. "I'll be glad to help you. What is the patient's name and room number?"

After getting the details, the receptionist put the call on hold and a few minutes was back and said, "That patient is

doing well. Her blood pressure is good. Her blood work came back normal and the doctor had scheduled her to be discharged tomorrow."

The caller said, "Oh, thank you! I was so worried."

"You're very welcome," replied the receptionist. "Is she your daughter?"

"No," said the caller. "I'm the patient. No one tells me anything!"

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Trade outcome disclosed by SMART

Representatives of the Secondary Materials and Recycled Textiles Association (SMART) were notified by the Office of the United States Trade Representative (USTR) that a proposed ban on second-hand clothing imports from the U.S. by members of the East African Community (EAC) will not be implemented by four out of the five countries who originally proposed the ban. Kenya announced their decision to back off from the ban in 2017, and Tanzania, Uganda and Burundi have now officially announced their decision to roll back the ban.

SMART acts on behalf of its numerous small and medium sized member companies who use, convert and recycle pre-and post-consumer textiles, including used clothing. In March 2017, SMART filed a petition and delivered testimony during a related hearing asking the U.S. government to conduct an out-of-cycle review of the African Growth and Opportunity Act (AGOA) beneficiary status of Kenya, Tanzania, Rwanda and Uganda and request the suspension of duty-free status for all currently eligible apparel imports from these countries. SMART filed the petition in light of a March 2016 announcement that those countries would begin phasing in a ban on imports of secondhand clothing and subsequent related

import duty increases on these goods. Armed with the information from SMART, U.S. government officials worked hard behind the scenes to convince the EAC countries to back off from the ban, paving the way for the secondhand textiles industry worldwide.

The proposed ban sparked international controversy regarding the textile industry's role in Africa, as no ban or increased duties were slated to occur on imports from China, the region's largest source of clothing imports. Whereas EAC heads of state were initially concerned U.S. secondhand textiles would disrupt their countries' own textile industries, SMART representatives argued new and secondhand apparel industries coexist independently in numerous developed and developing countries, including the United States' own thrift store and new retail establishments.

The decision by Kenya, Tanzania, Uganda and Burundi not to implement the imports ban is a victory for both the EAC countries and the secondhand textiles industry. For the people of the EAC, many rely on secondhand clothing and shoes imports as their only affordable access to quality apparel. For the secondhand textiles industry, it means international imports to the EAC will continue, with

more than 190,000 jobs within the U.S. alone being preserved, as the total exports to the EAC represents roughly 22 percent of the U.S. industry's total exports.

The U.S. government announced the intent to suspend duty-free treatment for all AGOA-eligible apparel products from Rwanda in 60 days. SMART representatives agree with President Trump's decision to suspend these benefits, instead of termination of Rwanda's status as an AGOA beneficiary, agreeing this would allow for continued engagement with the aim of restoring market access and thereby bringing Rwanda into compliance with the AGOA eligibility requirements.

"It is our hope that Rwanda will reconsider their position on banning secondhand clothing imports as it will impose unnecessary economic harm to its people," says SMART executive director, Jackie King. "We would also like to express our appreciation to the Office of the U.S. Trade Representative and other U.S. officials who worked diligently to ensure the best possible outcome for our industry and the members of the EAC. We are truly grateful to learn our trade relationship with Kenya, Tanzania, Uganda and Burundi will be maintained, which could not have been successful without the U.S. government's support."

Copper

■Continued from Page 1

purity metals from these complex, mixed-metal feeds." By embracing new technologies, the recycling/recovery industry will be able to process materials the primary metallurgical facilities cannot in order to close the loop.

In fact, emew's technology has proven ideal for copper recovery from complex, low-grade, mixed-metal solutions often found in copper recycling, copper refinery bleed, copper SX-EW bleed, and direct electrowinning from copper leach solutions.

The original and patented emew electrowinning technology was developed by emew in Australia in 1992 to overcome some of the limitations of conventional electrowinning. Here's how it works: In general, electrowinning is a process in which metal ions are recovered from solution when a direct current is applied across an anode and cathode submerged in an electrically conductive solution causing the metal to deposit onto the cathode.

"Conventional electrowinning uses planar anodes and cathodes submerged in a stagnant electrolyte bath which can cause complications with depletion zones, low purity product and low current efficiency under certain common conditions," stated Bergfeldt.

The emew electrowinning technology uses cylindrical cells in which the electrolyte is rapidly circulated past the electrodes at very high velocities which overcomes the issues associated with depletion zones, and enables depletion of metal to much lower concentrations while achieving the highest purity of metal possible.

As Bergfeldt explained, the emew electrowinning cells are closed systems

that completely eliminate acid mist and other noxious gasses making it a much safer place to work.

Chinese Ban Impact

Although historically China has relied on imports for around half of its scrap copper needs, the Chinese government informed the World Trade Organization in 2017 that it would stop accepting certain types of foreign solid waste, including metals, if they did not meet stricter impurity thresholds. In 2017, China's top three sources of scrap copper included Hong Kong, the U.S. and Australia, accounting for about 45 percent of the imports during the first 11 months of 2017.

Part of its goal to limit imports of what China refers to as "Category 7" scrap metal means that it will have far-reaching implications for the copper market. According to statistics released from China's General Administration of Customs, there were significant drops in imported scrap metal volumes in January 2018 as compared to the previous year. For example, the shipment of scrap metal to China fell to 490,000 metric tons compared with a volume of 660,000 metric tons in January 2017. The January 2018 amount of aluminum, copper, and ferrous scrap reflects a 30 percent drop from December 2016 and a 5.7 percent drop from one year ago.

"Since the infrastructure of our cities, industries and technologies depend on the red metal, the outlook for copper is bullish," Bergfeldt said. "Copper recycling and recovery from secondary low-grade materials and complex scrap will become increasingly important in the coming years as primary resource grades decline. The time is ripe for recycling/recovery companies to lead the industry in the use of innovative technologies to economically and sustainably recover copper from a growing list of low-grade, mixed-metal streams."

Events Calendar

May 7th-10th

AISTech 2018. Pennsylvania Convention Center. Philadelphia, Pennsylvania.
724-814-3000 | www.aist.org

May 7th-11th

NPE2018. Orange County Convention Center. Orlando, Florida.
202-974-5200 | www.npe.org

May 9th

CARE Conference. Orange County Convention Center, Orlando, Florida.
706-428-2127 | www.carpetrecovery.org

May 14th-16th

North American Waste-to-Energy Conference (NAWTEC). Lancaster Marriott at Penn Square, Lancaster, Pennsylvania.
800-467-9262 | www.swana.org

May 20th-23rd

The Federation of New York Solid Waste & Recycling Conference/Trade Show. The Sagamore Resort, Bolton Landing, New York.
585-732-5376 | www.nyfederation.org

May 21st-22nd

NRRA's 37th Annual Northeast Recycling Conference & Expo. The Radisson Hotel and Expo Center, Manchester, New Hampshire.
800-223-0150 | www.nrna.net

June 2nd-4th

Waste Conversion Tech Conference & Tradeshow. Borgata Hotel Casino and Spa Atlantic City, New Jersey.
850-386-6280
www.wasteconversionconference.com

June 25th-28th

Air & Waste Management Association's Annual Conference & Exhibition. Connecticut Convention Center, Hartford, Connecticut.
800-270-3444 | www.awma.org



NewsVoice of Salvage, Waste and Recycling

877-777-0043 Fax 419-931-0740

Owner, Publisher and Editor

ESTHER G. FOURNIER
news@AmericanRecycler.com

Editorial Focus Section Editor, Production and Layout

DAVID FOURNIER, JR.
david@AmericanRecycler.com

Production and Layout

MARY E. HILL
mary@AmericanRecycler.com

Marketing Representatives

MARY M. COX
maryc@AmericanRecycler.com
MARY E. HILL
mary@AmericanRecycler.com

Circulation Manager

DONNA L. MCMANUS
donna@AmericanRecycler.com

Writers and Contributors

DONNA CURRIE
dcurrie@AmericanRecycler.com
MARK HENRICKS
mhenricks@AmericanRecycler.com
MAURA KELLER
mkeller@AmericanRecycler.com
RON STURGEON
rons@rdsinvestments.com

Production Offices

6546 Weatherfield Court, Ste C-2
Maumee, OH 43537
877-777-0043 fax 419-931-0740
www.AmericanRecycler.com

American Recycler is published 12 times per year, postage paid at Columbia, Missouri.

SUBSCRIPTIONS: Call our offices at 877-777-0043 or visit www.AmericanRecycler.com. US 1 year \$48; 2 years \$72.

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Amazon, International Paper and Starbucks join The Recycling Partnership

Amazon, International Paper and Starbucks Coffee Company have joined on as new funding partners of The Recycling Partnership, a growing national nonprofit that leverages corporate investment to transform recycling for good in hundreds of communities across the country. By supporting The Recycling Partnership, these major brands along with 34 other companies including Coca-Cola, Target, Pepsi and P&G are helping create more circular economy jobs, more material recovery and stronger, more equitable communities.

“Amazon, International Paper, and Starbucks Coffee Company have stepped up to the plate by dedicating dollars to create healthier communities through recycling,” says Keefe Harrison, chief executive officer of The Recycling Partnership.

In just four years, The Recycling Partnership has leveraged \$29 million in infrastructure to support 640 communities and counting to improve access to recycling and increase quality of recyclables.

The growing groundswell of support from partners like Amazon, International Paper, and Starbucks shows that leading companies, across and within industries, want to invest in recycling solutions that create positive

environmental, economic, and social change.

The Recycling Partnership’s goal is to help every family in America recycle and recycle well, so that the country can double its current recycling rate and capture 22 million more tons of recyclables per year, avoid 50 million metric tons of greenhouse gas annually, and save \$250 million in contamination costs every year.

“As one of the world’s leading producers of renewable, fiber-based packaging, pulp and paper, we are committed to strengthening our people and the communities where we live and work, using all resources responsibly and efficiently and ensuring our businesses are safe, successful, and sustainable for generations to come,” says Aimee Gregg, general manager recycling at International Paper. “Working with organizations like The Recycling Partnership, help us meet these commitments.”

Companies that are making sustainability part of their corporate goals are the future of American business, according to Harrison.

From Portland, Maine to Chicago, Illinois to Santa Fe, New Mexico, The Recycling Partnership has already impacted a quarter of the U.S. population through its recycling solutions.

I told my girlfriend she drew her eyebrows too high. She seemed surprised.



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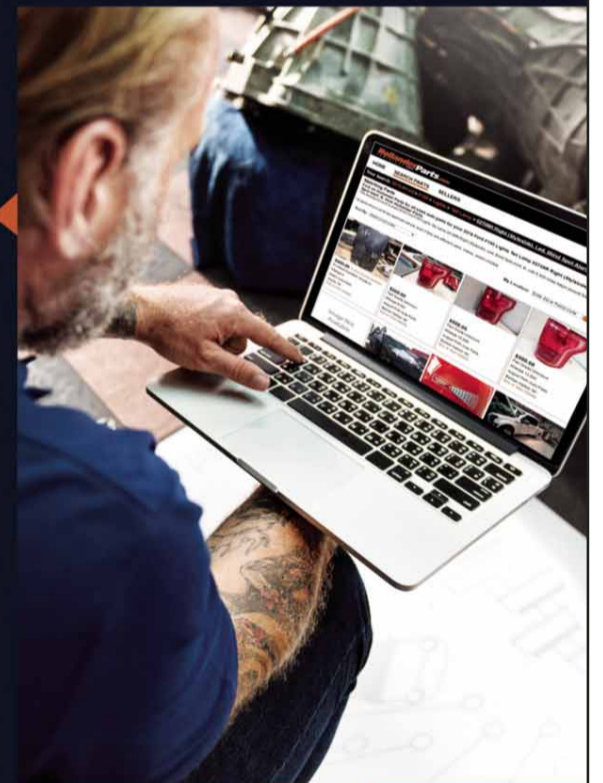
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HOLLANDER

Plastics leaders rally for better recycling infrastructure priorities

The Plastics Industry Association (PLASTICS) and 11 partner associations delivered a letter to Capitol Hill calling on the house majority and minority leaders to develop and advance an infrastructure investment package to address the need for better recycling efforts and innovation. The timely and urgent call for discussion cites recent decisions – and ultimately, disruptors to U.S. recycling programs – by China to reduce or end the import of scrap material from other nations, coupled with the loss of valuable feedstock for American manufacturing when material that isn't recycled ends up in landfills.

“Recycled materials are a national resource that are under-utilized in our economy. The facilities that are needed to process recycled materials require modernization. Our letter to lawmakers invites the start of a national dialogue on improving our recycling infrastructure, and jumpstarting the nation's ability to collect, process and recycle more of these valuable commodities,” said Plastics vice president of government affairs Scott DeFife. “The nation faces a critical juncture in waste management policies, and the federal government can work with state and local entities to make significant inroads with greater investments in recycling education and infrastructure.”

According to the 2016 Environmental Protection Agency's Recycling

Economic Information Report, in one year recycling and reuse in the U.S. accounted for 757,000 jobs, \$36.6 billion in wages and \$6.7 billion in tax revenue.

“The U.S. recycling industry is in a transformative time, and through investment in our recycling infrastructure, we can ensure the industry changes and grows in a way that will meet our domestic manufacturing needs for years to come,” said Kim Holmes, Plastics' vice president of sustainability.

The letter outlines the following priorities to prioritize recycling in the U.S.:

- Retrofitting Material Recovery Facilities (MRFs) with advanced sorting equipment that can identify and properly handle a wider range of packaging forms, including flexible film and smaller items made of otherwise recyclable material

- Quicker permitting of MRFs, plastics recycling facilities, and conversion technology facilities that create valuable chemicals and energy products

- Increased use of recycled material in infrastructure products where appropriate

- Broadened use of private activity bonds for recycling projects

- Incentive grants for state and local governments to expand curbside recycling options and the range of materials collected. Providing access to curbside

recycling to all U.S. residents (less than half of Americans presently have the same level of access to curbside recycling as trash collection) will standardize the types of material that can be and are recovered across the country

- Education and training to improve understanding of what is recyclable, and to promote the manufacturing jobs aspect of the recycling process will support American jobs, the U.S. economy and the environment. Those jobs are created when recycling is picked up at the curb, when it's taken to a facility to sort it out into metals, plastics and paper and when those materials are turned into something new

The signatories represent public and private sector associations and organizations including:

- American Chemistry Council
- Association of Plastics Recyclers
- Carpet America Recovery Effort
- Flexible Packaging Association
- Foodservice Packaging Institute
- GreenBlue
- Institute of Scrap Recycling Industries
- National Waste & Recycling Association
- PAC Packaging Consortium
- Solid Waste Association of North America
- The Recycling Partnership

Caterpillar group head retires after 30 years of service

Following a distinguished career spanning nearly 30 years with the company, Caterpillar Inc. announced that group president Rob Charter has elected to retire. Since 2015, Charter has been a group president of customer & dealer support (C&DS).

Charter's retirement will be effective June 1, 2018. The company expects to announce a replacement in the near future.

Charter joined Caterpillar in 1989 as a development engineer in Melbourne. Early in his career, he worked in service training, machine sales and service, mining product support, manufacturing, construction, quarry and forestry. Charter was also a district manager in Australia.

Charter's next leadership position was with Caterpillar's Asia Pacific Division in Tokyo as product manager. In 2005, he was appointed southern region manager in Caterpillar's Latin America Division, a position he held until 2008 when the Caterpillar board of directors named Charter vice president of the Asia Pacific Distribution Services Division. He held this position until January 2013 when he was appointed as vice president of the Excavation Division.

Charter became a group president and a member of Caterpillar's Executive Office in 2015.

■For more PLASTICS NEWS, see Page B1



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New Hampshire the Beautiful offers grants to schools

New Hampshire the Beautiful (NHtB) has been known for their equipment grants which have assisted as many as 10 to 15 municipal transfer stations/recycling centers each year by granting funds to assist with the purchase of equipment, signs and curb side recycling bins. Recently, the NHtB board voted to offer a new annual grant award to schools with innovative waste reduction ideas or school recycling programs. The grant stemmed from Campbell High School's recycling group, Campbell Recycling Advocacy Program better known as C.R.A.P., who received a NHtB grant to purchase a wire stripper so that they could process donated copper wire for recycling and ultimately earn some extra money for their school.

Now other New Hampshire schools looking to improve their school recycling program will have an opportunity to apply for grant funding. Applicants could be a school recycling club looking to make recycling more efficient or easier, to an environmental or science club with a waste reduction idea that needs a little extra push to get off the ground.

Grant Details – Any school that currently has a recycling program or is

trying to start one can apply. Simply write an essay detailing your school's current program and how your group hopes to improve upon it or build it. Include information on how winning this grant award will benefit your program or group.

This grant is awarded annually as part of a new award to be presented to the winning participant(s) at the Northeast Resource Recovery Association's School Recycling Conference each May. Essays should be submitted to NRRA's School Recycling CLUB, www.schoolrecycling.net. Essay submissions will be reviewed and one school/group winner will be chosen by NH the Beautiful Board Members prior to the conference.

Winners will be notified prior to the conference. Attendance is not necessary but is strongly encouraged. Grant funds will be awarded in the amount of \$500 and made payable to the school/club/organization.

To learn more about previously awarded grants and for a direct link to submission entry details, view this article on www.AmericanRecycler.com.

SWACO poll shows positive views on recycling in Ohio

A public opinion poll conducted by the Solid Waste Authority of Central Ohio (SWACO) and EMC Research determined that the majority of Franklin County residents recycle because it's the right thing to do and is good for the environment. The survey also revealed that limitations on what is accepted for recycling and access to recycling containers presented barriers to recycling activities for some residents.

SWACO is using the detailed and statistically valid data to inform decisions about waste diversion program offerings in 2018 and beyond including use in the development of a public policy agenda and programmatic strategic plan.

SWACO hired EMC Research to conduct a random telephone interview of 600 Franklin County households in November 2017. The survey sample was representative of Franklin County's population in terms of age, gender, education, income, race and ethnicity, and geography. Most residents surveyed (73 percent) lived in single-family house and most (81 percent) had access to recycling at their home.

Key findings of the poll included:

- Nearly three quarters of the residents surveyed are recycling regularly, but access is a problem for residents in multi-family housing and limitations on what's accepted for recycling in the curbside program were cited as barriers to additional recycling.

- Residents generally have a favorable view towards recycling, with 93 percent saying it is a source of community pride.

- Residents believe in recycling's beneficial environmental impacts as well as broad economic impacts, with 94 percent saying local governments should lead the way toward recycling and waste reduction.

- About half report confusion about what can be recycled.

Even with limitations on what is accepted in the curbside recycling program by the Material Recovery Facility,

Franklin County still boasts a diversion rate of 46.5 percent which is higher than the national average (34 percent). Like communities across the nation, SWACO is interested in creating innovative solutions to increase waste diversion and reduce waste stream contamination. To that end, SWACO intends to use the data from the survey to create additional waste diversion education and programs to overcome recycling barriers and to help avid and hopeful recyclers increase their efforts and knowledge. SWACO has established a community-wide goal of reaching 50 percent diversion by the end of 2020 and 75 percent diversion by 2032.

Using the findings to advance SWACO's goals

To assist with accomplishing the shorter term goal of reaching 50 percent diversion and overcoming reported barriers regarding confusion, in 2018, SWACO is launching a countywide awareness and marketing recycling educational initiative titled *Recycle Right, Make a Difference*. The program will help to address questions about why certain materials – such as #5 plastics – aren't currently accepted and will focus on how recycling right leads to greater environmental, social and economic benefits for the entire community.

While 96 percent of single family households in Franklin County have access to a curbside program, recycling opportunities for multi-family properties are limited to securing a private contract or utilizing one of SWACO's more than 50 drop off recycling locations across the County. SWACO will implement programs to address commercial recycling, including multi-family housing units in 2019 as outlined in the strategic plan adopted by the SWACO Board of Trustees.

Finally, in 2018, SWACO will create an action plan to address food waste reduction and diversion and will adopt a public policy agenda which will guide the organization's local and statewide advocacy efforts.

Plastinsa joins Foundation

Plastinsa has joined Waste Free Oceans' efforts of reducing water pollution by partnering with the foundation.

Plastinsa is a family based company, founded by Jose Luis Banos in 1978. It is one of the leading companies in Spain for promotional POS/POP products made for the food and beverage industry. They produce coolers, ice buckets, bottle openers, menu boards and various bar/restaurant accessories.

Plastinsa started out as the tooling department of Caiba SA, a plastic transformer also founded by Banos in 1955. Jose Luis Banos was a visionary and great entrepreneur. He was the first person to produce a plastic bottle for the olive oil market in the early 1960s in Spain and he took a leading role in the

PVC to PET conversion during the late 1980s. Caiba is nowadays one of the largest producers of PET bottles in Southern Europe.

Fifty percent of all products made in Plastinsa are made of injected plastic, mainly PS, but also PEHD and PP (handles and caps for bottles); 30 percent are made of wood (crates, trays, exhibitors, displays); 20 percent are made of metal (mainly aluminum, stainless steel).

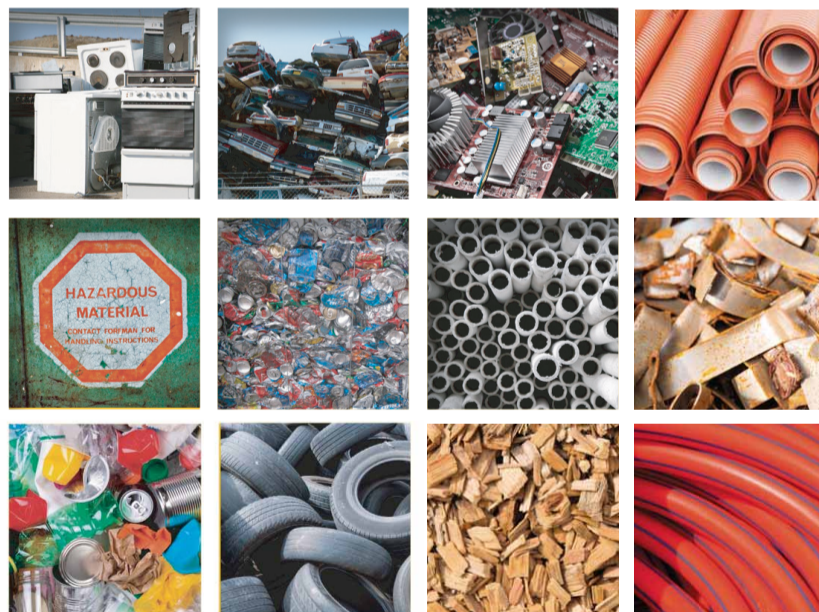
Plastinsa has been searching for more sustainable ways to do business. They are carrying yearly energy saving programs, educational programs for employees, various quality certifications and are set to a zero waste policy where they reuse 100 percent of their scrap internally.

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NFL Super Bowl achieves 91 percent diversion rate

The NFL, in partnership with PepsiCo, Aramark, U.S. Bank Stadium, SMG and the Minnesota Sports Facilities Authority, scored a zero waste legacy project at Super Bowl LII, with 91 percent of all trash generated on game day from 67,612 fans responsibly recovered through composting, recycling and reuse.

The landmark project marks the highest diversion rate achieved at U.S. Bank Stadium and at any previous Super Bowl, and aims to serve as the benchmark for future large-scale events.

The results are in following the big game: nearly 63 tons of the 69 tons of game day waste were recovered through recycling or donation for reuse (62 percent) and composting (29 percent). Recovering waste through com-

posting and recycling reduces waste disposal costs and provides several environmental benefits including reduction of landfill use and reduction of the greenhouse gas generated by the landfill process, gasses which contribute significantly to global warming.

“The zero-waste legacy project is a testament to teamwork, with multiple partners coming together to achieve an ambitious environmental goal,” said director of the NFL’s environmental program Jack Groh.

U.S. Bank Stadium partners, including the Minnesota Sports Facilities Authority, stadium operator SMG, and Aramark, kicked off the effort to achieve a zero-waste operation in 2017, and were joined by the NFL and PepsiCo in the lead-up to Super Bowl LII.

NWRA launches Organizations for Supply Chain Recycling

The National Waste and Recycling Association (NWRA) launched the formation of Organizations for Supply Chain Recycling (OSCR), a multi-industry coalition comprised of trade associations that will focus on the challenges to the recyclable materials supply chain from manufacturing to infrastructure and everything else it touches.

“Until now, there has not been an effective forum to discuss issues, share ideas, and advocate for complete supply chain recycling solutions,” said NWRA president & chief executive officer Darrell Smith. “This broad coalition is an opportunity to partner with stakeholders that will support a sustainable supply chain and a renewed demand for recyclable materials that will encourage job creation.”

The resurgent U.S. manufacturing base will increase demand for raw materials that can be met in part through the use of recyclables. In addition, the looming large scale investment in America’s infrastructure will not

only require recycled materials for its completion, but will also create materials through the construction and demolition process that can be recycled or will need to be disposed of properly.

The coalition will host educational forums and pursue policies that encourage a strong domestic recycling market and responsible waste disposal as well as vibrant economic growth. Industry groups throughout the supply chain, from mining to electronics, are encouraged to join.

The coalition will host educational forums and pursue policies that encourage a strong domestic recycling market and responsible waste disposal as well as vibrant economic growth. Industry groups throughout the supply chain, from mining to electronics, are encouraged to join. There is no charge for membership.

Jim Riley, NWRA’s vice president of Federal Affairs and Deputy General Counsel, will lead the coalition. The membership list is currently in formation.

ExxonMobil joins The Recycling Partnership with \$1.5 million commitment

ExxonMobil is the first energy company to join The Recycling Partnership, a rapidly growing national nonprofit that leverages corporate investment to transform recycling for good in hundreds of communities across the country. Through support and collaboration, ExxonMobil, along with 34 other companies including Coca-Cola, Target, Amazon, Pepsi, Starbucks and P&G, is helping The Recycling Partnership create a sustainable future through recycling.

In just four short years, The Recycling Partnership has reached 33 million households in 640 communities, which is almost a quarter of the U.S. population, through its efforts to improve recycling access and increase the quality of recyclables. Since 2014, the nonprofit has leveraged \$29 million in infrastructure diverting a total of 115 million pounds of recyclables from landfills, avoiding 164,000 metric tons of greenhouse gas and saving 2.0 trillion BTUs.

PLASTICS

Berry Global highlights the possibilities of plastics

Berry Global Group, Inc. is taking steps to drive the discussion around the broad and significant benefits of plastics. The company's chairman and chief executive officer, Tom Salmon, presented alongside other industry leaders at the World Petrochemical Conference in Houston, Texas.

"It is time for us to tell a new story. A new story about the progress that plastics has supported. The promise plastics holds for everyday lives around the world. And the potential to transform the human experience. It's time for us to speak with a strong and unified voice about the Possibilities of Plastics," Salmon said.

Salmon, on a panel with other plastics and petrochemical industry leaders, engaged in an impassioned and powerful discussion about the positive ways plastics are impacting lives every day. Salmon pointed out the gap in perspective between how the industry sees itself and how those outside the industry view plastics.

■For more PLASTICS news, see Page B1

"Plastics in healthcare, food preservation, agriculture, and an array of other industries, is creating products that help save and improve lives every day," Salmon said. "And in terms of sustainability, the impact of lighter weight plastics that require less energy and carbon emissions to produce, as well as growing rates of recyclability and use of recycled resin, these facts reflect how plastic is making a substantial positive contribution around the world."

Berry is encouraging the industry to take a more collaborative role in educating consumers of the benefits plastics can provide. Berry launched an internal program called Plastics Ambassadors to lead education and advocacy among its employees and internal stakeholders, and the company is engaging with resin suppliers and other partners to work together strategically to tackle this challenge more broadly.

The World Petrochemical Conference gathers leaders to examine the challenges and opportunities ahead.

A mother's bachelor son invited her to his house for dinner. He had just gotten two new dogs and wanted his mom to meet them.

When she sat down at the table, she noticed that the dishes were the dirtiest that she had ever seen in her life. "Have these dishes ever been washed?" she

asked, running her fingers over the grimy surface.

"They're as clean as soap and water could get them," he answered.

After dinner, he put the dishes on the floor and whistled, yelling, "Here, Soap! Here, Water!"

INDUSTRY PROFILE

A Closer Look

by Donna Currie

Becker Iron & Metal Co., Inc.

Mike McDavid • 205-324-2211

Mike McDavid cheerfully said he doesn't have an official title at the Becker Iron & Metal Co., but he works as a broker. "We're a small family company," he said. "I'm just an old friend." Morris and Ginny Becker are the founders of the Alabama business.

"Morris worked for a scrap yard for a few years before I got into the business," McDavid said. "At some point, he opened a small scrap yard here in town, and he worked out of that yard." The bulk of the business was brokerage, "but he had the yard for 25 years or more."

That original scrap yard closed "about six or seven years ago," McDavid said, and the business continued as a brokerage-only enterprise. Today, Morris is "technically retired" while Ginny still handles bookkeeping for the company.

McDavid traveled along some of the same paths as the Beckers after a short stint in the restaurant business, followed by a job at a foundry supply company. Neither of those were what McDavid was looking for.

At that time, McDavid's father was working for a steel warehouse, and he heard that a local nonferrous scrap recycler was looking for an account executive. Even better, they were willing to train. "What is scrap?" McDavid asked his father, when he heard about the job. He went through several interviews and landed the job.

His first view of the scrap yard was one of wonder and amazement. "When I first stepped onto the yard there – the capacity – I had never seen that kind of big industry." Everything from cranes to wire choppers was a new experience. "I was wide-eyed," McDavid said.

While the experience was great, it was also exhausting as McDavid priced nonferrous on the scale, walked loads coming in by rail from all over the country, and bought scrap over the phone. "I literally ran from the office to the yard," he said. While he might have been in the best physical condition in his life, when he got an offer to venture into brokerage, he welcomed the change.

He learned about the ferrous end of things at his new job and did a lot of traveling, up to two weeks out of each month, usually driving. It was less physically demanding, but when he got an offer from a small nonferrous brokerage company that didn't require as much travel, he settled in for the next 16 years. Later he moved to a ferrous brokerage firm where he ended up doing some business with Morris Becker's company, and actually doing some brokerage work for Becker as part of the job. It made sense for him to join Becker permanently, in December of 2006. "Two key components made it an attractive move: the ease of doing business with the Beckers and their ethical business practices, particularly with on-time payments to customers," said McDavid. His assistant will soon retire and his wife will take her place.

Becker family members Jon and Ryan, along with a nephew, Mark Childress, also work at the company. Jon and Mark trade scrap while Ryan is involved in bookkeeping. The company is doing well," he said. "Jon, Mark and Ryan are very capable guys."

The majority of ferrous material is sold locally. "We have three strong mills," McDavid said, but some shipments travel just a little further.

While business is good, margins are tighter because of competition, and freight costs have gone up. "Trucking and rail logistics are probably the biggest challenges of the day," McDavid said.

In just one example, a load that would have cost \$1,375 to move last year is now quoted at \$1,900. "That's a nightmare we're all dealing with." Even when people are willing to pay the price, getting trucks can be a problem since a number of trucking companies have gone out of business and existing companies are having a hard time hiring qualified drivers.

Rail isn't much better. "Customers that ship by car say they can never get all the cars they need," McDavid said. It's a problem getting material from point A to point B at a reasonable rate, no matter how that material is moved.

Because of his long tenure in the industry, McDavid said that he's still dealing with people he first met in the 1970s, and he enjoys the personal contact. While some of the younger people like to text message and McDavid has become used to it, he still prefers to pick up the phone and talk to people when he can. "The personal contact is the real joy."

When that call results in a deal where the customer is happy, and everyone else involved is happy, that's the deal that McDavid loves to make.



Mark Childress (broker) on left, Mike McDavid (broker) in middle, Jon Becker (company manager and broker) on right.

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ALTERNATIVE ENERGY

Duke Energy using renewable natural gas in unique project

A Duke Energy power plant is using renewable natural gas from North Carolina-based hog farms to produce electricity – the first application of the technology from in-state farms.

“This is a major breakthrough for renewable energy in North Carolina,” said David Fountain, Duke Energy’s North Carolina president. “This project allows for the capture of emissions from hog operations and converts the renewable natural gas to electricity for customers. We look forward to continuing our work on future projects.”

Sometimes called directed biogas, the Optima KV project in Duplin County captures methane gas from the hog waste of five local farms. Using more than 42,000 feet of in-ground piping, the methane is moved to a central location where the gas is cleaned and converted to pipeline-quality natural gas.

The project injects the renewable natural gas into the Piedmont Natural Gas system which transports it to Duke Energy’s Smith Energy Complex in Richmond County where it is used to produce electricity. Optima KV completed its interconnection to Piedmont Natural Gas last week.

“Biogas is such a rich resource for the state, especially for North Carolina’s agriculture industry,” said Gus Simmons of Cavanaugh & Associates, a partner of

OptimaBio. “Harvesting unused organics such as swine manure from farms can create a new business opportunity for farmers, provide an in-state source of energy fuel and improve the sustainability of the agriculture and energy sectors. It’s a win-win.”

Announced in 2016, the project is expected to yield about 11,000 megawatt-hours of electricity – enough to power about 1,000 homes.

Historically, renewable natural gas has been used by smaller, on-site generators that are connected to the overall energy grid. Using Duke Energy’s larger, more efficient plants allows more renewable energy to be created with the same amount of renewable natural gas.

“Optima KV is just the first of more projects where directed biogas will be used at Duke Energy power plants to create efficient renewable energy. Getting projects to a meaningful scale is important as we advance this innovative technology,” added Fountain.

The project will help Duke Energy satisfy state swine waste-to-energy mandates under the Renewable Energy and Energy Efficiency Portfolio Standard law in North Carolina. Under this law, Duke Energy must generate 0.20 percent of its retail sales from swine waste by 2023.

Red Bulls names Covanta as Official Energy Partner

Red Bull Arena now powered by renewable energy from nearby energy-from-waste facility

The New York Red Bulls announced an official partnership with Covanta, a leader in sustainable waste and energy solutions for communities and businesses. The agreement designates the Morristown, New Jersey-based company as the Official Energy Partner of the New York Red Bulls. Covanta is providing renewable energy to power Red Bull Arena from its Energy-from-Waste facility in nearby Newark, New Jersey.

Covanta’s Energy-from-Waste facilities use post-recycled waste from municipalities and businesses to generate clean electricity. The process is a sustainable alternative to landfilling and reduces greenhouse gases. In fact, Energy-from-Waste is the only major source of electricity with a net-negative greenhouse gas footprint.

By shifting from primarily fossil fuel generated electricity to using renewable energy, the Red Bulls are taking a

big step in reducing their carbon footprint, saving 5,000 tons of carbon dioxide, equivalent to the carbon sequestered annually by a forest the size of over six New York City Central Parks. In addition, Covanta’s electricity results in a further net lifecycle greenhouse gas reduction of 9,500 tons by keeping waste out of landfills – the same savings achieved by pulling 1,800 cars off the road.

As a result of the partnership between the Red Bulls and Covanta, visitors to Red Bull Arena now have the opportunity to learn the importance of more sustainable waste management including recycling, composting and energy recovery. Covanta and the Red Bulls will tell the story through LED displays and videos, branded waste and recycling receptacles and fan-participation activities outside of the arena on match days.

It's alright if you don't agree with me... I can't force you to be right.

C & D

Liebherr to invest \$45 million at its Virginia facility



Liebherr-International AG, a family owned company and one of the world's largest manufacturers of construction machinery and earthmoving equipment has invested \$45 million in the expansion of its Newport News, Virginia, facility.

Liebherr has been manufacturing and operating in Newport News for over 48 years. The new expansion will include the construction of 3 new buildings on 28 acres adjacent to Liebherr's current manufacturing facility. With this investment, Liebherr continues to grow its operations in the U.S.

Once completed, the new facilities will total over 251,000 square feet and will be occupied by Liebherr USA, Co. The expansion will offer space for the company's new headquarters and administrative building, a production and workshop facility, and a warehouse and distribution building.

Construction is expected to begin in July 2018 and be completed by summer of 2020.

RUBBER

Michigan awards 85 tire collection grants

The Michigan Department of Environmental Quality (MDEQ) has awarded \$1,204,428 in grants to fund 74 community scrap tire drop-off events and other tire cleanups across the state.

Community events will provide affordable and convenient tire recycling opportunities to residents, including creation of year-long collection sites and roadside pickups. Additionally, 10 grant projects will fund the removal of old tire piles at private properties. A law enforcement agency requested funding to help deter dumping of tires, and funding will also be used to reimburse one holdover grant from fiscal year 2017 (Herman Ekkel Property).

Improperly dumped, scrap tires pose a fire hazard and create mosquito breeding grounds. Recycled scrap tires can be used in asphalt to pave roads, as mulch in gardens and on playgrounds and in manufacturing processes.

TOP 10 APPLICANT GRANTS	COUNTY	AMOUNT
Greater Detroit Resource Recovery	Wayne	\$280,000
Auburn Road LLC	Macomb	\$200,000
Ron Tosch	St Clair	\$62,500
Southwest Michigan Solid Waste	Various	\$44,000
Mark D. Egner	Genesee	\$40,400
Hillsdale Conservation District	Hillsdale	\$40,000
Muskegon County	Muskegon	\$38,000
Burtis Myers Property	Lake	\$36,000
Eaton County Resource Recovery	Eaton	\$30,000
Jackson County Conservation District	Jackson	\$22,000

Goodyear holds annual meeting

The Goodyear Tire & Rubber Company announced the re-election of 12 members of the Board of Directors to new one-year terms at the company's annual shareholder meeting.

In addition, shareholders voted in favor of an advisory resolution approving the compensation of its named executive officers and voted to ratify the appointment of Pricewaterhouse Coopers LLP as the company's independent registered public accounting firm for 2018.

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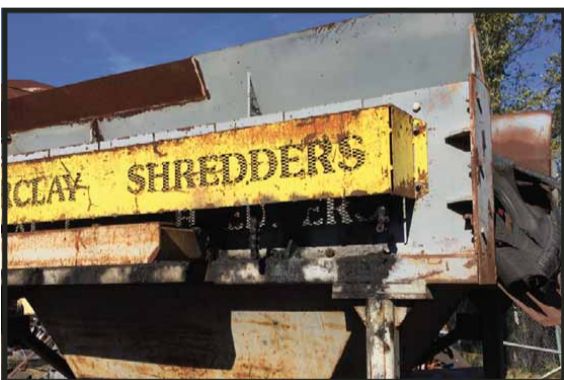
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METALS

Novelis Aluminum gives boost to electric taxis with lightweight parts

Novelis will supply its premium aluminum for the new London Electric Taxi. London Electric Vehicle Company (LEVC) has developed an all-new zero-emissions capable taxi, the TX, with an aluminum frame. The use of lightweight aluminum sheet was incorporated into the design of the TX to help reduce weight and boost the driving range with Novelis Advanz™ 5F- s5754 RC for the upper body and Advanz™ 6F – e170 for the motor hood.

LEVC aims to produce thousands of vehicles a year in order to tackle the air quality crisis in cities around the world. The latest construction techniques have been used to build a taxi that is lighter, more fuel efficient, and better to drive – while still meeting the rigorous demands and life expectancy of a purpose-built taxi. The TX will run for approximately 70 miles (110 kilometers) on a full battery charge before switching to a petrol engine for an additional 300 miles (480 kilometers).

As electric vehicle growth is projected to increase in the next decade, automakers will adopt aluminum to lightweight vehicles and improve performance. Novelis is a partner of choice for automakers throughout their development journey to collaborate with OEMs on how to adopt aluminum and offer solutions that achieve dramatic weight loss, while increasing fuel effi-



ciency, reducing emissions and providing equal or better quality, strength and durability compared to other materials.

“Many automakers and particularly those like LEVC that sell urban vehicles are allocating more time and resources to electrification and lightweighting as a way to increase the performance of the vehicle and reduce CO2 emissions,” said Michael Hahne, vice president, automotive, Novelis Europe. LEVC wants to create cities that are cleaner and greener for everyone and by incorporating more infinitely recyclable and lightweight aluminum into the design of their vehicles,

Novelis is helping LEVC achieve that mission.”

By incorporating aluminum into this design, LEVC joins a number of automakers moving toward electrification and increasing consumers demand more in-vehicle content, lightweighting solutions will enable automakers to increase electric vehicle range while still allowing OEMs to add technology components that enhance the driver and passenger experience. Aluminum supply for the TX will be sourced from the Novelis’ plant in Nachterstedt, Germany.

British metals group acquires Florida scrap business

The British GFG Alliance has purchased a Florida-based scrap business Export Metals by GFG member company, Liberty Recycling.

The operation at Tampa, includes a deep sea port and becomes the first part of what will be an extensive network of scrap collection and processing facilities designed to support Liberty’s planned steel manufacturing operations in the U.S.

News of the Florida acquisition follows closely upon Liberty’s completion of a deal to acquire the Georgetown steelworks in South Carolina and work is now underway there to recruit a workforce and prepare the shuttered plant for re-start in the second quarter of the year.

Liberty has declared its intention to build a major portfolio of metal manufacturing and downstream industrial assets in America as the latest phase in a global expansion which has already seen the group commit more than \$3 billion to acquisitions in the UK, Australia and France.

Sanjeev Gupta, executive chairman of the GFG Alliance said: “Investing in U.S. steel assets is part of our global strategy to produce steel locally, using domestic raw materials and green energy and selling largely into local markets.”



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METALS

Steel imports down year-to-date through February

U.S. IMPORTS OF FINISHED STEEL MILL PRODUCTS
BY COUNTRY OF ORIGIN (Thousands of Net Tons)

	FEB 2018	JAN 2018	2017 Full Year	2018 Annualized	% Change 2018 Annual vs. 2017
SOUTH KOREA	277	339	3,753	3,698	-1.5%
JAPAN	90	143	1,504	1,393	-7.4%
GERMANY	116	90	1,405	1,237	-12.0%
TURKEY	56	140	2,191	1,172	-46.5%
TAIWAN	75	117	1,245	1,154	-7.3%
BRAZIL	42	104	987	878	-11.1%
CHINA	60	72	813	792	-2.6%
VIETNAM	32	66	749	591	-21.1%
All Others	1,175	1,263	16,914	14,631	-13.5%
TOTAL	1,923	2,334	29,561	25,544	-13.6%

Based on preliminary Census Bureau data, the American Iron and Steel Institute (AISI) reported that the U.S. imported a total of 2,363,000 net tons (NT) of steel in February 2018, including 1,923,000 NT of finished steel (down 18.0 percent and 17.6 percent, respectively, vs. January final data).

Year-to-date (YTD) through 2 months of 2018, total and finished steel imports are 5,245,000 and 4,257,000 NT, down 5.3 percent and 3.5 percent, respectively, vs. the same period in 2017. Finished steel import market share was an estimated 24 percent in February and is estimated at 25 percent YTD.

Key finished steel products with significant import increases in February compared to January include heavy structural shapes (up 60 percent) and wire rods (up 37 percent). Major products with significant year-to-date (YTD) increases vs. the same period in 2017

include oil country goods (up 57 percent), hot rolled sheets (up 33 percent), line pipe (up 30 percent), hot rolled bars (up 27 percent), mechanical tubing (up 17 percent) and plates in coils (up 16 percent).

In February, the largest volumes of finished steel imports from offshore were from South Korea (277,000 NT, down 18 percent from January final), Germany (116,000 NT, up 28 percent), Japan (90,000 NT, down 37 percent), Taiwan (75,000 NT, down 36 percent) and China (60,000 NT, down 16 percent). For the first two months of 2018, the largest offshore suppliers were South Korea (616,000 NT, up 8 percent vs. the same period in 2017), Japan (232,000 NT, down 5 percent), Germany (206,000 NT, up 54 percent), Turkey (195,000 NT, down 61 percent) and Taiwan (192,000 NT, down 10 percent).

Liberty prepares for mill restart in South Carolina

Twenty workers clocked on for duty at Georgetown steel mill in South Carolina on April 3rd for the first time in over two years as preparations were stepped up to bring the shuttered plant back to life.

On April 16, a further 20 colleagues joined them in carrying out repairs and maintenance on the Liberty Steel Georgetown plant, which is scheduled to re-open soon, following its acquisition by British industrialist Sanjeev Gupta's GFG Alliance in December.

These first groups of workers are all former plant employees returning under a recall agreement with the United Steelworkers which enables them to reclaim their previous employment. Following the shutdown in 2015, many had taken jobs outside the steel industry but have now grasped the opportunity to come back to the sector, where some had worked for decades.

Meanwhile more than 300 people have applied for the initial 125 jobs that will be available at the Georgetown plant, a figure that is expected to rise to 250 as production is ramped up at the mill, which will make various grades of wire rod for the construction and automotive sectors.

Sanjeev Gupta, executive chairman of the GFG Alliance said: "This is a landmark day for the mill and for the

city of Georgetown. There is still a lot of work to do but it is very encouraging and satisfying to see skilled and experienced steelworkers walking back through the gates to take up their jobs again.

"The GFG Alliance has big ambitions to invest and help to revive the U.S. steel industry, and today is a hugely significant milestone in the process. We're now eager to press ahead with all the preparatory activity and get production going again at this iconic site."

Following maintenance, repairs and upgrade of equipment, the company aims to restart production in the second quarter of the year and intends to operate its electric arc furnace at full capacity as soon as feasible.

Over the remainder of 2018, Liberty Steel Georgetown (LSG) will focus on ensuring wire rod coils from its rolling mill are meeting customer specifications and, thereafter, the plant will expand production to meet customer demand.

In particular, during the re-start phase, Liberty will be holding discussions with potential customers on their future requirements and will be concentrating on re-gaining certifications and approvals the plant previously held with high-end customers.

METAL RECYCLERS

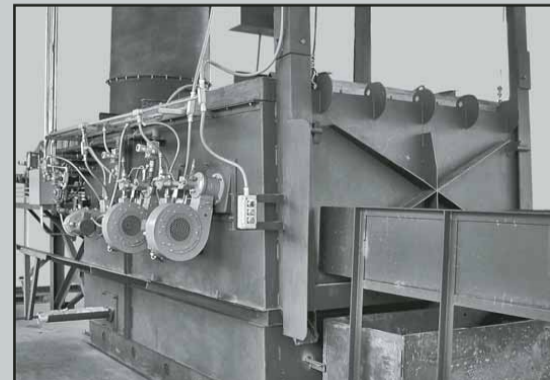
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MarketWatch



Commodity		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
#1 Bushelings	per gross ton	\$275.00	294.00	305.00	349.00	398.00
#1 Bundles	per gross ton	265.00	252.00	280.00	294.00	395.00
Plate and Structural	per gross ton	270.00	245.00	295.00	295.00	375.00
#1 & 2 Mixed Steel	per gross ton	215.00	204.00	228.00	291.00	340.00
Shredder Bundles (tin)	per gross ton	189.00	185.00	232.00	230.00	240.00
Crushed Auto Bodies	per gross ton	189.00	185.00	232.00	230.00	240.00
Steel Turnings	per gross ton	102.00	104.00	105.00	195.00	271.00
#1 Copper	per pound	2.70	2.72	2.88	2.87	2.81
#2 Copper	per pound	2.47	2.57	2.13	2.75	2.67
Aluminum Cans	per pound	0.69	0.74	0.60	0.72	0.74
Auto Radiators	per pound	1.94	1.76	1.90	1.96	1.97
Aluminum Core Radiators	per pound	0.72	0.72	0.63	0.59	0.59
Heater Cores	per pound	1.32	1.24	1.35	1.31	1.64
Stainless Steel	per pound	0.67	0.64	0.62	0.62	0.64

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

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AUTOMOTIVE

AISI applauds EPA reconsideration of auto emissions standards

Thomas J. Gibson, president and chief executive officer of the American Iron and Steel Institute (AISI), issued the following statement in response to the EPA announcement to revisit federal greenhouse gas standards for 2022–2025 model year vehicles:

“This announcement by Administrator Pruitt is a positive development for the steel industry and our partners in the auto

sector. In the past, we expressed concern the good faith efforts by our industry and our customers were short-circuited by the previous administration in an attempt to push through a final determination before all of the public comments were thoroughly considered. We have been working with the EPA toward revisiting this measure, and applaud today’s decision to pause and look at ways the light duty

vehicle program can be addressed to allow assessment of other factors affecting the environment and economy. Sole focus on tailpipe emissions has the potential to produce unintended consequences – both increased cost and negative effects on the environment. We would urge consideration of the full life cycle environmental impact of vehicles, from production through end of life, during this reconsideration process.”

Citing a recent ISO-conformant, peer-reviewed study conducted by the Steel Recycling Institute, Life Cycle Greenhouse Gas Study of Automotive Lightweighting, Gibson said, “Steel offers the best solution for the environment, the best performance and cost effective solution for automakers, and the best value for consumers. Steel is a key part of the solution for the auto sector in their work to lower greenhouse gas emissions. Significant differences in emissions between advanced high-strength steel and alternative materials in the production phase far outweigh emission reductions in both the driving and recycling phases. In addition, a potential cost increase, of at least \$600 to \$1,200, will impact vehicle sales and lead to a reduction in employment.”

ADESA and EMKAY raised over \$260,000 for JDRF

ADESA, a business unit of global automotive remarketer, KAR Auction Services, Inc., announced its ADESA auctions and EMKAY, a privately owned fleet management company, together raised \$267,000 over a 6 year fundraising partnership in support of JDRF. JDRF is the leading global organization funding type 1 diabetes (T1D) research.



In 2017 alone, a 9 month JDRF fundraising campaign between the two companies raised \$56,960 for JDRF. During March 1 to November 30, 2017, EMKAY and ADESA each made matching donations generated across 20 participating ADESA auction locations.

JDRF’s research mission is to discover, develop and deliver advances that cure, better treat and prevent Type 1 diabetes. It is the largest charitable supporter of T1D research.

SALVAGING Millions

by Ron Sturgeon
Autosalvageconsultant.com

Building a Network List

The first article in this series listed more than 25 tactics to increase your business success, all of them based on my experience. I started with nothing and didn’t attend college, so I know you can achieve maximum success, regardless of your education. E-mail me to get the first article (or any of the other articles) in the series. Each takes a closer look at one of the tactics listed in that first article.

This may seem trivial, but this must be one of my top 10 most important secrets of my success: No matter how smart you are or how hard you work, you simply can’t achieve maximum success without help. Many of my articles talk about how you need others to help you, using leverage, delegating, being efficient, on and on. Many of those tactics require mastering this seemingly trivial tool.

When I was 30, I was saving business cards. I started using a pocket electronic rolodex in the 80s, which some ridiculed. This was long before iPhones or PDAs (Can you say Treo or Palm?). If you had a lake house, I knew the phone number. I was everyone else’s phone directory. All my friends used to say, “Sturgeon’s got the number; ask him.”

I’m not sure when I truly realized the value of keeping a database of contacts, perhaps it was in the 90s, I just knew it made me more efficient and saved time (another article in this series covers tactics to find an extra hour per day). I had a protocol for entering contacts though. I always entered the full name, telephone, mailing address and keywords. This was important. If I met you at a business meeting, I’d use your card to enter what your profession and keywords like “met at Kiwanis Club May 1993.” When I presented my first private stock offering I had over 2,000 contacts. Today, its 4,000 and I also placed

them in categories, for further sorting.

It takes me a minute or so, but it has paid off in spades. Need an SBA loan consultant? I’ve got 3 in my phone. Plumber? I can type the word plumber in the keywords, and 12 of those folks pop right up. I recently had a friend hit a young boy on a bicycle and kill him. He needed a criminal attorney. I’ve never needed one but had 3 referrals. The list goes on and on. I use the list. If you and I were business friends, you would regularly hear from me by mail. Today, I email mostly but the principle of building a contact list is the same.

I have the contact information for every reporter who ever wrote a story about me, every banker that I met or who has given me a loan, every attorney, real estate professional and folks that do obscure things like land survey, phase-one environmental reports, CAD drawings or transportation cost audits. Imagine all the folks that you’ve met that you later you wished you could remember when needed.

Today, it’s about e-mail. In a flash, as fast as you can say keep a list, I can reach out to that guy I met 5 years ago who does asbestos remediation reports. That’s efficient! I just scan my Outlook contacts for the word asbestos and I am on it!

Now, about that stock offering: They say one out of 10 private stock offerings gets to document stage, and one out of 50 actually funds. That’s one-in-500 odds. I sent my first one out to my list in 1998 (they are called friends-and-family offerings) and oversubscribed it in 2 weeks, raising \$1 million. I’ve done 4 since, all oversubscribed. Many have asked me how to do it, but they don’t have a list; they haven’t kept it through the years. My magic list also makes party invitations and Christmas cards a breeze.

Kobe Steel to invest in automotive high strength steel at Kakogawa Works

Kobe Steel, Ltd. plans to make capital investments of approximately 50 billion yen at Kakogawa Works centered on a new continuous annealing line for steel sheet in response to the growing demand for automotive ultra-high-strength steel (UHSS). Kobe Steel will go forward with construction and plans to start up the new facility in February 2021.

To meet stricter regulations for fuel efficiency and collision safety, automakers have been promoting lighter car bodies with higher strength in recent years. Rising demand for automotive high-strength steel and the need for functional improvements are anticipated to further increase in the future.

Kobe Steel decided to make the new capital investments in response to the need for higher production capacity and productivity, looking ahead to rising demand for automotive high strength steel, and also in response to the need for steel with higher strength and higher formability in the future.

A new facility will combine a continuous annealing line with hot-dipped galvanizing and galvannealing equipment. The new production line will produce both cold rolled steel and hot-dipped galvanized/galvannealed steel.

The continuous annealing line to be newly constructed will be equipped with

cutting-edge heat treatment functions. With regard to cold rolled steel and hot-dipped galvanized/galvannealed steel, the new annealing line will enable the production of UHSS2 with high formability to meet customer needs.

Together with the construction of the new line, Kobe Steel will also increase the production capacity of its existing pickling and tandem cold mill3 and material handling equipment.

Kobe Steel has established a global production network for automotive high-strength steel in three locations: Kakogawa Works in Japan, PRO-TEC Coating Company4 in the United States, and Kobelco Angang Auto Steel Co., Ltd.5 in China.

The capital investments at Kakogawa Works will enable Kobe Steel to expand its production of UHSS with high formability and to realize the simultaneous production of this steel in Japan and the U.S. together with PRO-TEC, which is currently constructing an additional hot-dipped galvanizing line.

By producing and supplying high-strength steel products of outstanding quality, Kobe Steel contributes to weight savings leading to higher fuel efficiency and lower CO2 emissions, as well as high strengthening leading to the higher safety of automobiles.

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.

WASTE

Facility logs 10 million tons of waste processed

Covanta and the Lancaster County Solid Waste Management Authority (LCSWMA) are celebrating the processing of 10 million tons of municipal solid waste – the equivalent to over 600 football fields filled 10 feet deep – at the Lancaster Waste-to-Energy (WTE) Facility.

LCSWMA's Lancaster WTE Facility, which Covanta designed, built and has operated since 1991, primarily serves the sustainable waste management needs of Lancaster County, with the capacity to process 1,200 tons of municipal solid waste per day to produce enough renewable energy to power over 20,000 homes continuously. In addition to processing 10 million tons since start-up, the facility has:

- Produced 5.6 million megawatt-hours of electricity, enough to supply all of the homes in the City of Lancaster for over 21 years

- Recovered 180,000 tons of ferrous metal for recycling, equivalent to over two Golden Gate Bridges

- Offset the equivalent greenhouse emissions of over 1.9 million passenger cars on the road for one year

The Lancaster WTE Facility has also been recognized as a Star worksite in the U.S. Department of Labor's Occupational Safety and Health Administration's (OSHA) Voluntary Protection Program (VPP). VPP Star status is the highest honor given to worksites with comprehensive, successful safety and health management systems.

A diner complained, "Waiter, there's a fly in my soup!"

His waiter replied, "That's entirely possible; our cook used to be a tailor."

Vibrating RO Membrane System solves leachate problem for Colombian landfill

In the Southwestern highlands of Colombia sits Cauca Valley. The ample rainfall, which at nearly 40 inches per year rivals that of Seattle. And in the town of Yotoco lies the Colomba El Guabal Landfill, which receives most of its 2,000 tons of solid waste per day from Cali, a city of 2.4 million people about thirty-five miles to the south.

Managing a landfill in a bucolic setting with high rainfall is extremely challenging. Even with proper daily cover applied, the rain permeates active cells and percolates through the matrix, becoming concentrated with undesirable organic and inorganic components. This "garbage tea" is called landfill leachate, and it must be removed from the landfill at a rate greater than the rainfall to prevent the waste from floating up and washing away.

The trouble is, landfill leachate is exceedingly difficult to treat with standard methods, and in the Cauca Valley,

the only discharge option is the already-threatened Cauca River. In order to discharge to the river, local environmental authority CVC requires the treated leachate to be near drinking water quality.

Landfill operator Interaseo del Valle collects all of the landfill's leachate in a pond system with capacity in the millions of gallons. The company first attempted to treat the leachate with a multi-stage treatment process that included physical/chemical separation, anaerobic digestion, aerobic digestion, clarification, oxidation, and mixed media filtration. While the resulting water was far cleaner than the leachate, it did not satisfy the discharge requirements of the CVC.

Seeking better treatment outcomes, Interaseo contacted the Bogota-based EPC Hidrosuelos, who had solved similar challenges at other landfills in the area. Based on those successes, Hidro-

suelos recommended a vibrating reverse osmosis membrane system called VSEP.

Designed and built in California by New Logic Research since 1987, VSEP has been deployed at several landfills in Latin America, where it is praised for its effectiveness and ease of operation. Rather than a multi-step process with elaborate pretreatment, the automated VSEP system is simply fed black colored landfill leachate directly from the ponds, and produces a clear permeate in a single step. Given the strength of the leachate, the VSEP permeate is passed through a second stage of spiral-wound reverse osmosis membranes to remove residual trace contaminants. This near-drinking-quality water has just 0.6 percent of the conductivity of the starting liquid, and meets all of the local regulations for discharge. The concentrated leachate goes back to the pond system where it is continually diluted with pure rainwater.

SWACO expands services to more communities

The Solid Waste Authority of Central Ohio (SWACO) community consortium program was created in 2005 to help the 41 communities in its solid waste district receive more value from their waste hauling contracts by using a competitive, collaborative bidding process for curbside trash, recycling and yard waste pick-up services.

Currently, 27 communities in Franklin County, representing over 108,000 households, participate in a consortium. The consortium and contract assistance help ensure that communities receive the best available services at the lowest price. The consortiums also act as a catalyst to implement best practices for diverting material from the landfill and reducing waste.

Last year SWACO assisted eight communities with their service contracts. As a result, Sharon Township and the village of Lockbourne began offering curbside recycling for the first time in January 2018. Upper Arlington, Worthington, Lockbourne and Norwich Township, representing 20,000 households, increased their recycling capacity by switching from 18 gallon recycling bins to 64 gallon cart recycling in January 2018. Cart based recycling programs provide more convenience to residents and can increase residential recycling by 30 percent. As a result, these types of programs are considered a best practice.

While they did not alter their recycling services in 2017, Clinton and Pleasant townships and the village of Brice all renewed their contracts for services at a lower price. In recent negotiations, SWACO helped to save these three communities \$144,110 over the next three years.

"By working together, these communities have been able to provide great value for their residents," said Kyle

O'Keefe, SWACO's director of innovation and programs. "They've also been able to upgrade their recycling services, which will increase recycling for the entire region. It's a true win-win, and proof that by working together we can move toward a more sustainable

Franklin County while still focusing on the bottom line."

SWACO's community consortium program is open to any municipality in Franklin County and remains a model for other counties in Ohio and around the nation.

"If you arrive fashionably late in Crocs, you're just late." —Joel Dommett

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WASTE

Waste Management reports increased revenues

Waste Management, Inc. (WM) announced financial results for its quarter ended December 31, 2017. Revenues for the fourth quarter of 2017 were \$3.65 billion, compared with \$3.46 billion for the same 2016 period. Net income for the quarter was \$903 million, or \$2.06 per diluted share, compared with net income of \$335 million, or \$0.75 per diluted share, for the fourth quarter of 2016. On an as-adjusted basis, earnings per diluted share were \$0.85 for the fourth quarter of 2017, compared with \$0.75 for the fourth quarter of 2016.

The company's fourth quarter 2017 results have been adjusted to exclude a net benefit of \$1.21 per diluted share related to the impact of the Tax Cuts and Jobs Act.

For the full year 2017, WM reported revenues of \$14.5 billion, compared with \$13.6 billion for 2016. Earnings per diluted share were \$4.41 for the full year 2017 compared with \$2.65 for 2016. On an as-adjusted basis, earnings per diluted share were \$3.22 for the full year 2017 versus \$2.91 for the full year 2016.

Jim Fish, president and chief executive officer of Waste Management, commented, "The strong results that we saw through the first nine months of 2017 continued into the fourth quarter as we saw organic revenue growth continue to translate into operating EBITDA growth. In the fourth quarter, we achieved double-digit growth in income from operations, operating EBITDA, and adjusted earnings per diluted share, and nearly 10 percent growth in both adjusted income from operations and operating EBITDA."

In the fourth quarter, overall revenue increased by 5.5 percent, or \$192 million, from the same period in the prior year. The revenue growth was driven by strong yield and volume growth in the company's collection and disposal business, which contributed \$172 million of the increase. For the full year 2017, overall revenue increased by 6.4 percent, or \$876 million. Yield and volume growth in the company's collection and disposal business increased revenue by \$536 million. Though revenue from the company's recycling

yield and volume declined by \$25 million on a year-over-year basis in the fourth quarter of 2017, full-year recycling yield and volume contributed \$231 million of revenue growth.

Internal revenue growth from yield for collection and disposal operations was 2.2 percent for the fourth quarter and 2.0 percent for the full year.

Traditional solid waste internal revenue growth from volume was 4.2 percent in the fourth quarter of 2017, or 5.0 percent on a workday adjusted basis. Total company internal revenue growth from volume, which includes our recycling and other ancillary businesses, was 2.6 percent in the fourth quarter, or 3.4 percent on a workday adjusted basis. For the full year 2017, traditional solid waste internal revenue growth from volume was 2.7 percent, or 2.9 percent on a workday adjusted basis. Total Company volume was 2.1 percent for the full year 2017, or 2.3 percent on a workday adjusted basis.

Average recycling commodity prices at the company's recycling facilities were

approximately 8.1 percent lower in the fourth quarter of 2017 compared with the prior year period. Recycling volumes declined 4.8 percent in the fourth quarter. Results in the company's recycling line of business declined by \$0.03 per diluted share when compared to the fourth quarter of 2016. For the full year, average recycling commodity prices at the company's recycling facilities were approximately 27.0 percent higher and volumes decreased 0.5 percent. The revenue increase, combined with reduced operating costs at the company's recycling facilities, drove an almost \$0.09 increase in the company's earnings per diluted share for the full year.

With continued commodity pricing pressure and expected cost increases from efforts to reduce contamination, earnings from the company's recycling operations are expected to decline from the record-high levels it saw in 2017. The company currently expects earnings from its recycling business to decline between \$0.08 and \$0.10 per diluted share in 2018.

SERVICE SPOTLIGHT



Equipment Refurbishers

by MARY M. COX

maryc@americanrecycler.com

As markets fluctuate, reconditioning equipment may sometimes be a more attractive path than replacement.

Crigler Enterprises offers rebuild services for recycling equipment nationwide. "We provide soup-to-nuts services – from simple repairs to complete frame up restoration. Crigler offers new electrical controls on all forms of balers, shears, loggers, compactors – and if it is found in a scrap yard, recycling facility or distribution center, we work on it. We always put the customer first and so are dedicated to finding the right solution for our clients, whether that involves rebuilding and updating their existing equipment or finding a new machine. Our qualified salesmen have over 60 years collective experience and can help with anything from a small corrugated operation all the way to large OCC sort systems sales and rebuilds," said Kathryn Renzi, president.

She noted that while it can be a challenge to find and maintain qualified personnel, Crigler has some of the best technicians available. They are always looking for good people to help them further expand their rebuild service program. "We have crews based out of Atlanta and Miami.

As we refurbish machines, we do our best to elevate technological efficiency for clients, often through the use of new processors and sensors. We are also the Southeast distributors for Harris Equipment and American Baler Company," Renzi stated.

She also mentioned how it seems that waste haulers and municipalities are steadily building more material recovery facilities and "efficiency has improved, due to technology such as optical sortation and other mechanical separation technology. This in turn, has reduced the level of labor required at facilities now."

Norton Equipment Company provides a full rebuild when refurbishing equipment, whether providing the service for a client or working on a machine that will be sold by Norton. "We strip a machine down to the bare frame and touch every part, rebuilding or replacing cylinders, installing new hoses, re-bearing motors, implementing a rewind if necessary – and a change of oil and filters/strainers. We inspect all electrical components, check safeties to ensure they are compliant with industry standards, clean and paint the machine, and even add new decal kits. Machines are in 'like new' condition when our refurbishment

process is complete," explained J.T. Norton, service manager. The firm's full service department works to keep customers up and running, with services in general repairs, on-site major repairs and preventive maintenance programs.

Norton also sells new equipment – compactors from apartment sizes up to five yard pre-crushers, self-contained and receiver boxes; balers, including verticals, closed doors, auto ties, large two-rams; conveyors and other equipment used by recyclers. "There aren't always funds available for new equipment and the cost of a refurbished machine is roughly half of new. The lead time for refurbished is also much shorter than factory lead times. We stand behind every piece of equipment we install and offer long term maintenance and repair of the products. We also enjoy educating clients about the benefits and revenue that can be generated from a well-trained recycling program, potentially a great savings for companies with landfill costs, hauling costs, etc.," Norton stated. The company serves the southeastern U.S., focusing mainly on Mississippi, Tennessee, and eastern Arkansas, working in large warehouses, grocery stores, paper plants, scrap yards and factories.

PROVIDER LIST



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Winter Equipment
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BUSINESS BRIEFS

Doosan names top performing dealers of 2017

■ Doosan Infracore North America, LLC, disclosed its top performing equipment dealers of 2017. These 10 Doosan dealer enterprises have demonstrated a high quality of customer service to provide exceptional sales, parts and services to their customers, scoring well on their annual dealer performance reviews.

The top 2017 Doosan dealers include the following enterprises:

- Equipment East (Massachusetts)
- Venture Drilling Supply (Texas)
- Bobcat of Omaha (Nebraska)
- Ironhide Equipment (North Dakota)
- Texas Timberjack (Texas)
- Cascade Trader (Washington)
- Gateway Bobcat (Missouri)
- Feenaughty Machinery Company (Oregon)
- RGW Equipment (California)
- Barry Equipment (Massachusetts)

Participants from the 10 top Doosan dealerships will be awarded a trip to Scotland later this year where they will explore the scenic landscapes and have the opportunity to attend The Open golf tournament, often referred to as The British Open.

Representatives from the top 10 Doosan dealers earned a spot on the Doosan Dealer Advisory Council, a group of individuals that serve as a resource for Doosan Infracore North America and provide feedback to the Doosan leadership team.

Why do they sterilize the needle for lethal injections?

Talbert strengthens dealer support in Canada

■ Talbert Manufacturing, a North American leader in specialized heavy-haul solutions, has welcomed Steve Gardonyi as Canadian sales manager. Gardonyi assists dealers in Canada with Talbert trailer sales, marketing and customization. He is also helping to bring the 80-year-old company's heavy-haul solutions to more people throughout the region, broadening the company's Canadian dealer network.

Gardonyi has nearly 30 years of industry experience, which includes operations management, quality control, sales and customer service. He also carries a Red Seal certification in trailer mechanics.

Gardonyi is active in his community through the Central Ontario District Optimists, where he served a term as governor. The club provides youth services — such as athletic leagues, scholarship essays and local school support.

C&M Conveyor names Morrison as sales manager

■ C&M Conveyor, a manufacturer and installer of material handling solutions, has named Richard Morrison as regional sales manager for the northeast territory including Virginia, West Virginia, Maryland, Delaware, New Jersey, Connecticut, Rhode Island, Massachusetts, New York, Vermont, New Hampshire and Maine.

Morrison has 25 years experience selling material handling systems in the corrugated industry. He received a Bachelor of Science degree from University of Notre Dame where he played football on a sports scholarship.

Vortex Companies enters strategic partnership

■ Vortex Companies recently announced a strategic partnership with Advantage Reline, developer of a Sprayed-In-Place Pipe (SIPP) trenchless technology for the municipal, industrial and commercial market sectors. The Vortex family of brands, which includes Schwalm USA, Quadex, Picote and Deep Trekker, combined with Advantage Reline's technology, will help broaden awareness and application opportunities for SIPP.

A critical component of Advantage Reline's SIPP technology is a custom spray nozzle that is attached to the Schwalm robot and can apply a variety of polymeric materials including epoxy and polyurea.

This "one stop shop" approach comes in the form of the Quadex spray-MASTER II, a fully equipped coating and lining trailer, that includes the primary delivery unit, a Schwalm robot, a Picote brush coating system, a Deep Trekker pipe inspection crawler, Advantage Reline SIPP technology and Quadex polymeric materials.

In addition to its cutting-edge SIPP technology, Advantage Reline's management team has more than 20 years of combined experience developing and delivering compatible trenchless pipe repair methods, such as Cured-in-Place Pipe (CIPP) and pipe bursting.

When they first invented the clock, how did they know what time it was to set it to?

Recycle Track adds to its board of directors

■ New York-based Recycle Track Systems (RTS), a waste and recycling management technology company, has appointed Shazi Visram, founder and former chief executive officer of Happy Family Organic Food Brands, as a member of its board of directors.

In 2017, RTS was the recipient of B Corporation Certification and is among a select number of for-profit organizations who meet the rigorous B Corp criteria regarding standards such as social and environmental performance, accountability and sustainability.

These business principles are also closely aligned with the standards at Happy Family. Visram, who has helped the company become one of the most dominant and successful organic baby food brands in the country, has also made it her mission to address the company's climate impact. In doing so, she created a Happy Family Climate Action Team to concentrate on environmental issues.

Visram also brings a proven and celebrated track record to the dynamic board, as she has been previously honored for her entrepreneurial achievements and her role in improving children's nutrition and happiness. She was named one of Babble's 100 Moms who are changing the world. Visram was also lauded by president Obama as "a rockstar of the new economy and a leader we can all emulate" for work such as Happy to Help, the Happy Family brand's far-reaching social and philanthropic initiative aimed at helping children in need.

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BUSINESS BRIEFS

Meridian Waste names Link corporate controller

Meridian Waste Solutions, Inc., a technology and integrated, non-hazardous solid waste services company, has named Donald G. Link, as corporate controller. He will work from the new corporate location for the company's waste operations in Greensboro, Georgia.

Link most recently served as vice president of finance at HawkeyePeder-shaab Concrete Technologies, a \$60 million annual revenue company, where he completed purchase accounting activities following an acquisition and was responsible for all treasury functions. Prior to that post, Link spent seven years with Contech Engineered Solutions as vice president financial planning and analysis, where he directed the company's \$600 million overall financial planning, budgeting and sales data.

Link holds a bachelor's degree from Clarion University with a concentration in accounting.

Charlton Jernigan joins Rulmeca Corporation

Rulmeca Corporation welcomed Charlton Jernigan to their company

With six years of motorized pulley and conveyor roller component production experience, Jernigan will strengthen the company's production and service capabilities. As production engineer, he will supervise production, perform CNC programming, make CAD drawings, and manage ECN, safety and quality control systems.

ASV names Thomas Foster as VP of operations

ASV Holdings Inc., a provider of rubber-tracked compact track loaders and wheeled skid steer loaders in the compact construction equipment market, has appointed Thomas Foster to the position of vice president of operations and supply chain.

Foster joined ASV with over 20 years of progressive experience in the industrial equipment sector and a track record of successful long term engagements at both the Boeing Company and SAF-Holland, Inc., and most recently, TGW Systems. Foster is a proven operations professional with a focus on workplace safety, manufacturing quality, productivity "lean practice" and supply chain management.

Foster will report directly to Andrew Rooke and will oversee all operating activities from sourcing to production and delivery, and will also have strategic planning and P&L responsibilities.

Interpump joins with Hose & Accessory Sales

Interpump Hydraulic Connectors has partnered with Hose & Accessory Sales (HAS) of Houston, Texas.

The partnership, official as of March 1, 2018, brings together two, experienced veterans of hydraulic hose. Interpump Hydraulic Connectors' product line is now available through HAS, who will serve as a sales agent for the brand in Texas, Oklahoma, Louisiana and Arkansas. The product line is stored in Houston, Texas, at HAS warehouse.



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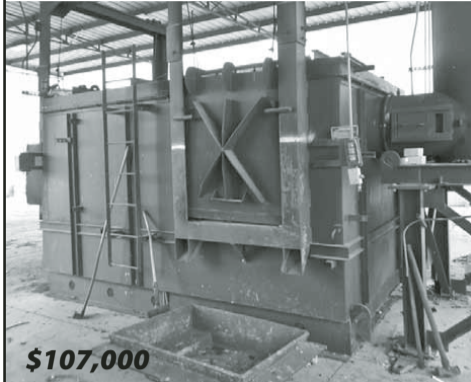
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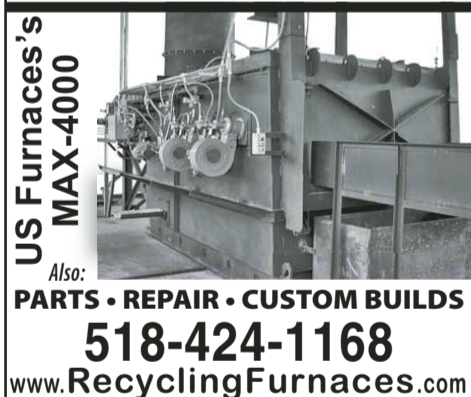
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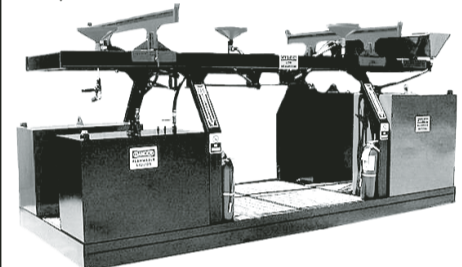
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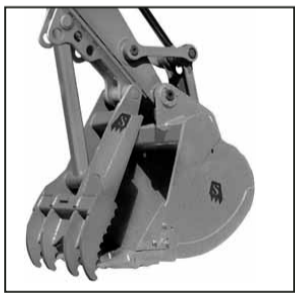
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BUSINESS BRIEFS

Green Development adds to leadership team

■ Green Development, LLC, a leader in renewable-energy solutions, has added three new employees to the organization's leadership team.

Paul Seidenberg, of Foxboro, Massachusetts, has been appointed vice president of operations, Matt Ursillo, of Coventry, Rhode Island is director of project management and Kevin Morin, of Harrisville, Rhode Island is director of civil engineering.

Paul Seidenberg brings 35 years of experience in the heavy civil, utilities, land development, and energy-related fields. He spent 15 years in the field before becoming a chief estimator, senior project manager and project executive at the Middlesex Corporation in Massachusetts. Seidenberg managed a variety of different projects including the construction of a 1.5 million gallon hydro-pillar water tower and an 80,000 gallon per day (GPD) sewer treatment plant. He also supervised single private development projects including hotels and open-air lifestyle centers up to \$250,000,000, as well as single-source contracts approaching \$30,000,000 for local distribution companies such as Eversource, Summit Gas, and Liberty Utilities in the transmission and distribution for electricity and natural gas. Seidenberg attended Hartwick College and Northeastern University.

Matt Ursillo offers a decade of project management, engineering and construction experience in the renewable energy and utilities field. Prior to Green Development, he worked for Exelon and the M&W Group as a project manager and engineer for a diverse range of projects throughout the energy industry. Ursillo is proficient in utility solar projects, fuel cells, electrical distribution, microgrids, demand response, cogeneration systems, fossil fuel power plants, boilers, chillers, HVAC systems, and civil site work. As the new director of project management, Ursillo oversees the execution of photovoltaic and wind energy projects. He holds a Bachelor of Science degree in mechanical engineering from the University of Rhode Island, an M.B.A. from Pennsylvania State University and a P.M.P. credential from the International Project Management Institute.

Kevin Morin has 25 years of engineering and project management experience in the civil, land development, and utilities field. Morin previously worked for DiPrete Engineering as vice president and senior project manager. He has managed land development projects across Rhode Island including renewable energy projects in both solar and wind, mixed use developments, urban redevelopment, apartment communities, and commercial and residential development.

After his divorce Mr. Jones realized that poker isn't the only game that starts with holding hands and ends with a staggering financial loss.

Gerdau completes sale of certain wire rod operations

■ Gerdau has completed the sale to Optimus Steel LLC of certain wire rod operations in the U.S. The transaction included Gerdau's mill in Beaumont, Texas, and downstream locations Beaumont Wire Products and Carrollton Wire Products.

The Beaumont mill has a melt shop capacity of approximately 700,000 tons, and is capable of producing both wire rod and coiled rebar.

Gerdau maintains a strong presence in North America, with a sizeable network of efficient, productive mills that are well-positioned to serve customers in the long products market.

Meridian Waste acquires environmental company

■ Meridian Waste Solutions, Inc., an innovative technology and integrated, non-hazardous solid waste services company, has acquired Environmental Trash Company in St. Ann, Missouri.

Meridian Waste will now provide waste and recycling services to about 2,000 commercial and residential subscription customers in St. Louis and St. Charles Counties from the company's existing Bridgeton, Missouri location.

Evac Group appoints Tuomo Valkonen as CFO

■ Tuomo Valkonen, M.Sc., has been appointed as the new chief financial officer (CFO), Evac Group, effective as of May 1, 2018. He will be based in Espoo, Finland, and report to Tomi Gardemeister, president and chief executive officer of Evac Group.

Tuomo has more than 20 years' experience in various financial roles. Previously, he has worked as the CFO at HKScan Group and CFO at CPS Color Group.

Evac is a leading provider of integrated waste, wastewater, and water management systems for the marine, offshore, and building industries.

Harris Waste to sell in UK and Ireland

■ Harris Waste Management is selling their equipment direct in the United Kingdom and Ireland, for the recycling and waste services industry.

Effective immediately, all sales will be handled by the company's long-established and experienced parts and service operation based in Tewkesbury, Gloucestershire.

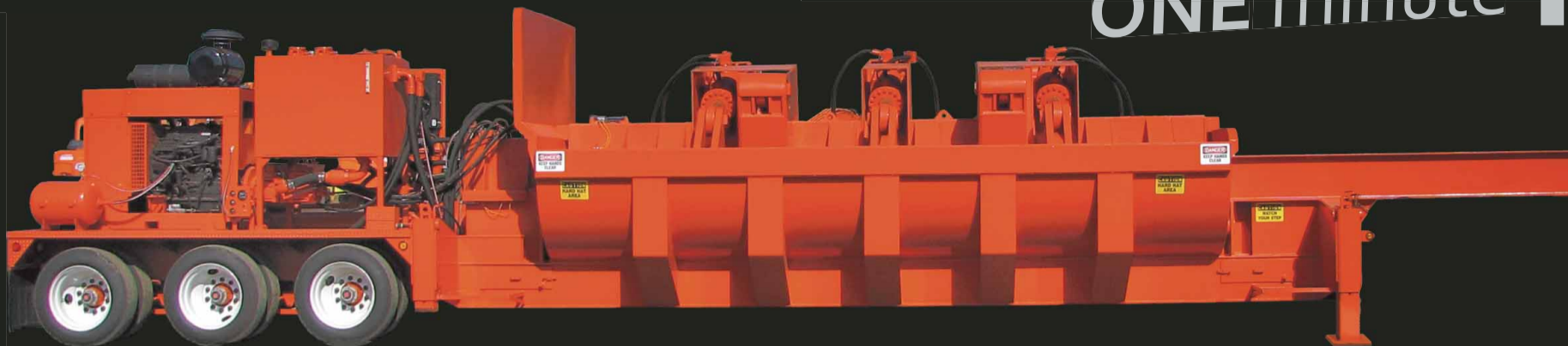
According to Harris, the company will now handle the sales process entirely in-house, from the quotation to the order, shipping, installation and commissioning and the all-important parts and service support.

Harris is regarded as the market leader in the supply of two-ram balers, capable of handling waste and recyclables including plastics, cardboard, aluminum and paper.

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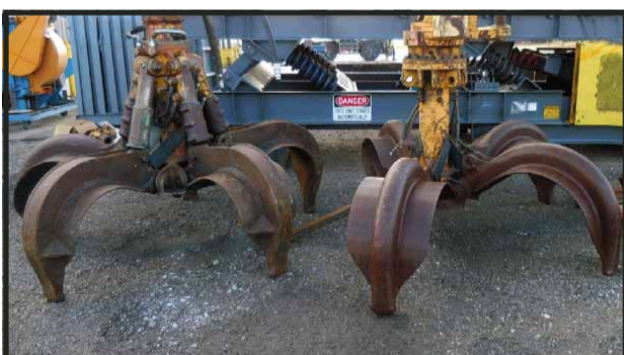
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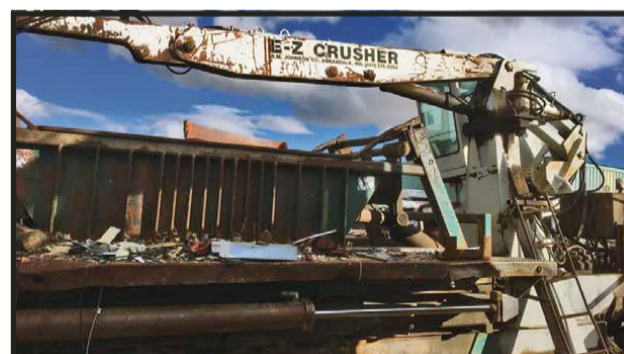
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The recycling sector and the Chinese ban

by MAURA KELLER

mkeller@americanrecycler.com

China's decision to ban imports of recyclable items, including paper and plastics, has eliminated a major end market for North American recyclers, negatively impacting the costs of recycled materials.

According to Stanley Chao, managing director of All in Consulting and author of *Selling to China: A Guide to Doing Business in China for Small- and Medium-Sized Companies*, and based on conversations with Chao's recycling clients who sell to China, the ban was a complete shock to them and the timing of it didn't give them time to look for alternative solutions.

"Looking at the U.S. recycling initiatives, the ban throws things into chaos," Chao said. "Everybody thought China would buy our garbage for the next 30 years. Nobody, and wrongly so, ever thought things were going to change. China is the world's manufacturing hub so it will continue to need recycled paper, plastics and metals."

Chao advised that all of the Western companies selling to China need to be close to their Chinese customers so they can gauge the future of their business. Things change so fast in China that companies constantly need to monitor the market, their customers, their competitors and the government ministry or ministries that govern their specific industry.

"U.S. recycling companies didn't do this. All of these waste companies sold to an agent or intermediary that sold to a Chinese recycling company. They were too far from the market and didn't understand what the recyclers were doing with the garbage. They didn't go to China to visit the end users of their product. They didn't see the writing on the wall when China declared 10 years ago that it had to clean up its pollution with respect to the air, food supply, soil, water and waste management," Chao said. "The U.S. companies didn't understand the social climate developing in China, as people became tired of all the pollution. China is getting out of the 'third world country' phase and wants to be the leader in technological advancements, geopolitical affairs, and on environmental concerns. It doesn't want to be seen as the world's garbage collector anymore."

As Jon Pyper, North America associate director of sustainability and advocacy at Dow Packaging & Specialty Products explains, the Chinese ban is now challenging communities to collaborate and rethink the way they manage waste locally. And, despite the plastics industry's efforts to increase the plastics diversion rate to 24 percent in 2014, per the U.S.



PHOTO BY MARCOVARRO | DREAMSTIME

EPA, the net impact of the China ban may result in a flat lining or decline of this rate.

"The ban is forcing recyclers and communities to get creative when identifying new local end markets, while trying to further increase diversion rates in the U.S.," Pyper said. "This may include the adoption of innovative technologies, such as sorting equipment, to improve the quality of their recyclables and energy recovery technologies, which capture embedded value from plastic and convert it into valuable resources such as oil, diesel and potentially chemical feed stocks." As Pyper explained, mechanical recycling and energy recovery are complementary means to capture the value of used materials and prevent them from being placed in landfills.

Potential changes to a community's waste management system present an opportunity to re-educate consumers on how to dispose, recycle and recover materials properly and to reinforce where discarded items go after they are collected at curbside.

To offset the effect of the Chinese ban, manufacturers are finding that they need to be creative. For instance, an important focus of Dow's 2025 sustainability goals is the company's dedication to sustainability through policies and programs that advance the vision of a circular economy, where waste is converted into new products and services.

"One of the ways we're doing this is by developing technologies that allow for the recycling of packaging formats that could not previously be mechanically recycled," Pyper said. An example of this is Dow's RecycleReady Technology, which is helping customers create recyclable pouches with the same benefits of multi-material packaging. The latest evolution of this technology, RecycleReady Technology with RETAIN polymer modifiers, enables the development of oxygen barrier packaging that can be recycled in areas where store drop-off programs exist.

"We would prefer if all plastics could be mechanically recycled, but unfortunately that is not the case," Pyper said. "However, if communities are unable to recycle certain plastic items and instead send them to landfills, they have the opportunity to utilize alternative diversion initiatives to capture their embedded value."

That is why Dow has also collaborated with Reynolds Consumer Products and other industry leaders to establish the Hefty EnergyBag program. The groundbreaking initiative offers an innovative approach to diverting hard-to-recycle plastics from landfills and converting the materials into valuable energy resources. The program complements existing recycling programs and can help remove otherwise

See CHINESE BAN Page B6

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WestRock Company signs agreement to acquire KapStone Paper and Packaging

WestRock Company and KapStone Paper and Packaging Corporation signed a definitive agreement, pursuant to which WestRock will acquire all of the outstanding shares of KapStone for \$35.00 per share and will assume approximately \$1.36 billion in net debt, for a total enterprise value of approximately \$4.9 billion.

Based on KapStone's annualized EBITDA performance in the second half of its fiscal 2017, WestRock estimates the EV/EBITDA multiples to be under 10 times before and 7 times after the full run rate of expected cost synergies and performance improvements. Upon closing, the acquisition is expected to be immediately accretive to WestRock's adjusted earnings and cash flow, inclusive of purchase accounting adjustments.

KapStone stockholders will have the option to receive \$35 per share in cash, or to elect to receive 0.4981 WestRock shares per KapStone share, with elections of stock consideration capped at 25 percent of the outstanding KapStone shares but no limit on the number of KapStone shares that can receive cash consideration. KapStone's chairman, Roger Stone, and president and chief executive officer, Matt Kaplan, have entered into voting agreements, pursuant to which they have agreed to vote their shares in support of the transaction, subject to certain limitations.

WestRock will finance the cash consideration through the issuance of

new debt under a fully committed financing package. WestRock expects to refinance existing KapStone debt assumed as part of the transaction upon closing. WestRock's expected leverage ratio at the closing of the transaction will be greater than 3.00x, and WestRock expects to return to its stated leverage ratio target of 2.25x to 2.50x by the end of fiscal 2019. The transaction is not conditional on financing.

Founded in 2005 and headquartered in Northbrook, Illinois, KapStone is a North American producer and distributor of containerboard, corrugated products and specialty papers, including liner and medium containerboard, kraft papers and saturating kraft. KapStone also owns Victory Packaging, a packaging solutions distribution company with facilities in the United States, Canada and Mexico. KapStone announced preliminary, unaudited adjusted EBITDA of \$130 to \$135 million for its fourth quarter 2017.

The transaction significantly enhances WestRock's scale and scope in the market and accelerates WestRock's ability to achieve its strategic goals and enhance its value proposition as the premier partner and provider of innovative, winning solutions to its customers:

- Creates opportunity for approximately \$200 million in cost synergies and performance improvements. The transaction is expected to generate annual run-rate cost synergies and performance improvements of approxi-

mately \$200 million by the end of fiscal 2021 that WestRock expects will be captured through the integration of the KapStone operations into WestRock's corrugated packaging system. The categories of benefits include process and capital improvements at mill and box plant locations, converting and network optimization, procurement and administrative efficiencies. The acquisition will enable WestRock to supply additional corrugated packaging to Victory Packaging. The acquisition will accelerate WestRock's plans to improve margins in its North American corrugated packaging business.

- Strengthens WestRock's presence on the West Coast. The addition of KapStone's West Coast facilities improves WestRock's ability to serve customers in this important area and reduce costs across its supply chain. In addition, this expansion opens new opportunities for WestRock to sell the full suite of its product portfolio to KapStone's current customers in this region.

- Broadens WestRock's differentiated paper and packaging solutions portfolio with the addition of attractive paper grades and distribution capabilities. The addition of KapStone's complementary specialty kraft paper offerings that WestRock does not offer today enables WestRock to provide a broader product portfolio to existing customers, as well as provides new opportunities to sell WestRock's enterprise-wide offerings to KapStone's customers.

- Increases mix of virgin fiber based paper in WestRock's paper portfolio. KapStone's 3 million tons of paper is made using 78 percent virgin fiber and 22 percent recovered fiber. This increases WestRock's overall mix of virgin fiber from 65 percent to 67 percent.

The transaction is subject to a number of customary closing conditions, including a vote by KapStone's stockholders, and is expected to close during the quarter ending September 30, 2018.

AF&PA releases paper reports

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

Containerboard

Containerboard production was down 3.0 percent compared to February 2017 and down 1.1 percent year-to-date. The month-over-month average daily production compared to January 2018 was 3.2 percent lower. The containerboard operating rate was 94.1 percent or 3.1 percentage points lower than the same month last year. Production for exports was 6.0 percent lower than February 2017 and 8.4 percent lower year-to-date.

Printing-Writing Paper Report

According to the February 2018 printing-writing monthly report, total printing-writing paper shipments decreased five percent in February compared to February 2017. U.S. purchases of printing-writing papers decreased four percent in February. Total printing-writing paper inventory levels decreased two percent from January 2017. Imports of printing-writing papers began 2018 four percent lower than January 2017 imports, while exports began the year 12 percent less than January 2017.

- Uncoated free sheet (UFS) paper shipments in February 2018 increased slightly compared to February 2017 shipments. Imports of UFS decreased by 14 percent year-over-year in January – the eighth consecutive decrease of 12 percent or more. Exports of UFS papers decreased five percent in January compared to January 2017.

- Shipments of coated free sheet (CFS) paper in February declined year-over-year for the ninth consecutive month. CFS inventories increased less than one-half of one percent compared to January. U.S. imports of CFS papers decreased four percent year-over-year in January, the seventh consecutive year-over-year decline. Exports of CFS papers decreased five percent year-over-year in January.

- Coated mechanical paper shipments also declined year-over-year for the ninth consecutive month while shipments of uncoated mechanical papers decreased year-over-year in February 2018 for the 20th consecutive month.

Boxboard Report

Total boxboard production increased 2.4 percent when compared to February 2017, but decreased 4.8 percent from January.

Unbleached Kraft Boxboard production increased over the month, but decreased compared to January.

Total Solid Bleached Boxboard & Liner production increased when compared to February 2017 and increased compared to January.

The production of Recycled Boxboard decreased compared to February 2017 and decreased when compared to January.

U.S. Packaging Papers & Specialty Packaging

Total Packaging Papers shipments were 207,700 tons, 3.1 percent lower than February 2017.

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Legislation ends plastic recycling barriers

The Wisconsin House and Senate passed Bill AB 789. The American Chemistry Council's Plastics Division welcomed the legislation and issued the following statement, which may be attributed to Craig Cookson, senior director of recycling and energy recovery:

"The American Chemistry Council's (ACC) Plastics Division applauds the unanimous passage of AB 789 in Wisconsin. This new legislation will make Wisconsin a welcoming environment for innovative new manufacturing that converts post-use non-recycled plastics into fuels, chemicals or feedstocks for new plastics.

"We're pleased to see legislation that attracts new innovative businesses and supports the creation of new jobs by treating post-use plastics as valuable raw materials for 'manufacturing' and not as 'waste.' In addition, AB 789 ensures that facilities which convert post-use plastics into liquid fuels, chemicals, waxes and lubricants are correctly regulated as manufacturing and not mischaracterized as solid waste management facilities. We applaud Representative Tittl and Senator Cowles for sponsoring this important legislation, and we urge Governor Walker to sign it.

"With this bill's passage, Wisconsin becomes the second state (after Florida) to unanimously adopt legislation that removes regulatory barriers to implementing these innovative technologies in their states. We congratulate these states for their leadership in plastics recycling and recovery, and look forward to additional states making similar progress."

Wisconsin recycles nearly 26,000 tons of plastics annually.

Subaru launches partnership with TerraCycle for "Subaru Loves the Earth"

Subaru and TerraCycle team up to divert waste and repurpose to improve communities

Subaru of America, Inc., announced a new partnership with TerraCycle® to help divert hard-to-recycle waste from landfills and incinerators through the automaker's environmentally-focused philanthropic platform, Subaru Loves the Earth. With less than a quarter of the 230 million tons of trash generated annually in U.S. getting recycled, Subaru and TerraCycle are teaming up to intercept and repurpose hard to recycle items.

Beginning in April, participating Subaru retailers will receive TerraCycle Zero Waste™ boxes encouraging customers, employees and community partners to recycle waste streams that are commonly thought of as hard-to-recycle, including snack wrappers/bags, disposable cups and lids, and coffee and tea capsules. In addition, Subaru will embolden customers to enhance their own commitment to sustainability by collecting these waste streams at their home or office and bringing them into a local participating Subaru retailer. For additional reference on recycling best practices, Subaru will also share a list of "Trash-Hacks," tips on limiting waste in your everyday life.

The collected waste streams will be turned into useful, high-quality recycled products, like park benches, picnic tables, and playground materials, and donated to Subaru community partners of more than 540 local retailers participating in the Subaru Loves the Earth initiative. Subaru retailers can also view and order products made from the recycled materials through an exclusive Subaru product-line, produced in conjunction with TerraCycle, expected to be available this autumn.

"At Subaru, we feel it's our personal responsibility to protect Earth's natural wonders and encourage our retailers and customers to engage in smart environmental practices, simply because it's the right thing to do," said Thomas J. Doll, president and chief executive officer of Subaru of America, Inc."

This collaboration complements the automaker's greater commitment to protecting the environment, including a



partnership with Recycle Across America (RAA) to standardize labels in the National Parks as part of the automaker's Zero-Landfill Initiative. The program aims to decrease landfill waste from parks by revitalizing recycling participation, replacing conflicting signs and messaging with the RAA system to help visitors recycle easily and effectively.

* Testimonial *

I received your publication by mail. I can confirm I have never seen it before in its hard copy version. I like the layout and it is very informative, in a league of its own in terms of quality information. No wonder it is the only recycling publication quoted on Lumistar's blog. I look forward to upcoming issues.



I have read issues of your publication in the past by accessing digital archives at one of two libraries I am a member of. Your website is also fantastic.

—Paul Angel, LUMISTAR CORPORATION

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EQUIPMENT SPOTLIGHT

Paper/Plastic Balers

by MARY M. COX

maryc@americanrecycler.com

A good baler for paper will not always be a good baler for plastic. When condensing paper, a horizontal extrusion baler works best with a tension cylinder compressing against the first bale as the second bale is made. High volumes of paper can be baled in this continuous operation. When plastic material is involved and because of the memory of the material, baling against a wall or door is best. A two ram baler can provide a large feed opening for fiber as well as controlling the harder to bale plastic containers.

American Baler Company designs for specific applications and specializes in both the horizontal auto tie baler and the two-ram style of balers.



American Baler

Mike Schwinn, sales manager for American Baler explained, "Regardless of the baler type, you'll want to make sure your baler performance follows the latest codes and safety specs. The best baler manufacturers have already converted to Category 3 safety standards, which include safety guards and controls that benefit those who are involved in baling operations. An operator should also be sure to select the right speed or horse power for the application involved. Choosing a dual horse power configuration will provide electrical savings as you start up the baler, as well as redundancy, allowing you to run on reduced horse power. Choosing the correct thrust or compaction force for an application is critical as this factor affects bale quality and weight. After you make the bale, it is moved around about six to seven times before it is recycled. The heavier the bales, the less wire, electrical, and material handling cost you have. All of these components, along with consideration of the feed

opening and the tie process, are part of selecting the right baler.

"Selecting a company with a good dealer network is important not only for after product support, but also for the perspective dealers possess because of their experience with so many applications. A manufacturer may know the baler models the best, but a good distributor can also help assure you've selected the best product for your particular operation."

Schwinn also mentioned that plastic recyclers are often concerned with storage issues. "Much more storage is required for a ton of plastic vs. a ton of paper. Due to the various grades of plastic involved, the storage areas required for each may be quite numerous. American Baler features the Versa Door on their two-ram balers, which allows the machine to run with a closed door for best bale quality, but also for ease of reducing contamination between grades of plastic being processed.

"We continuously strive to stay abreast of changes in baling technology. In addition to PLC information, we can also provide clients with custom reports and the ability to view real time bale count data displayed on a large production board – info that can be useful in maximizing productivity," he said.

Since 1946, International Baler Corporation (IBC) has been a leader in the design and manufacture of commercial and industrial balers for paper, plastics, metals, and numerous specialty materials. "Offering more than 200 different baler models," said Sean Usoff, director of sales and marketing, "allows us the flexibility to adapt to customer needs."

Those needs, Usoff said, may be changing. "The industry is experiencing some tough times due to new regulations relative to China, and how prices have

dropped a bit over the last year, but I believe the industry can recover. The challenge is finding new end buyers that can take material currently available. As equipment manufacturers manage the effects of new tariffs, not only will the cost of raw materials for new equipment construction be affected, but also the cost as recyclers maintain existing equipment."

After more than 70 years in the industry, IBC is no stranger to these kinds of changes. Usoff reports that IBC's two-ram line has become increasingly popular for recyclers who want a solid, heavy-duty baler as well as quick material changeover for reduced contamination. The higher pressure of a two ram is also perfect for tough products like plastics, making preconditioning unnecessary.

"Most recent trends have skewed toward more centralized, large, single stream recycling operations. Effects of the new contamination regulations relative to China will most likely trickle down to global single stream operations, which will then result in the need for cleaner material output. This process will likely spur heavy investment in new sorting equipment, and perhaps more dedicated baling practices, to minimize material cross contamination."

For single material applications, Usoff suggests IBC's open-end auto-tie for a combination of high-volume throughput and heavy bale weights, making quick work of shredded paper from document destruction or daily pile-up of OCC in a distribution center. Lower volume facilities will find our horizontal and vertical manual-tie balers to be long-lasting workhorses – a staple on many loading docks, producing 1,000 to 2,000 lb. bales of

OCC." Heavy duty models are available for plastics and scrap metal.

"With a focus on customer satisfaction," Usoff said, "our balers are engineered for reliability, safety, and ease of operation. More importantly, they're designed to meet ever-changing industry demands and customer feedback so we stay at the forefront of

See SPOTLIGHT, Page B5

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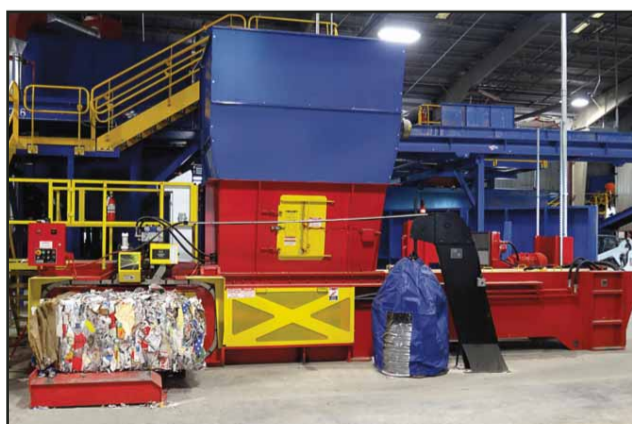
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Spotlight

Continued from Page B4

baler technology and emerging markets. IBC also offers expertise in systems integration, customer support services and application consultation.”

Maren Engineering manufactures recycling balers and has been doing so since the mid 60s. “Our manufacturing process, along with the design of our balers produces a more structurally sound baler than other balers available in the market. With the use of piston pumps, our balers provide speeds similar to higher horsepower machines, but our baler still saves on the electrical cost of running the machine. The high pressure performance of our baler also creates a smaller bore cylinder, compared to other baler brands that run at a lower pressure. While all balers perform the same task

by compressing material, the baler manufactured by Maren is set apart by the product’s Smart Bale Operator Interface. This feature is a duplicate of the interface on the baler and is a tablet that can be carried with an operator. It makes the operator’s job easier by providing control over the baler without the need to leave the loader, Bobcat or forklift. An operator is free to change the grades of material being baled, tie off a bale, or even start or stop the conveyor,” stated Roger Williams, western regional sales manager.

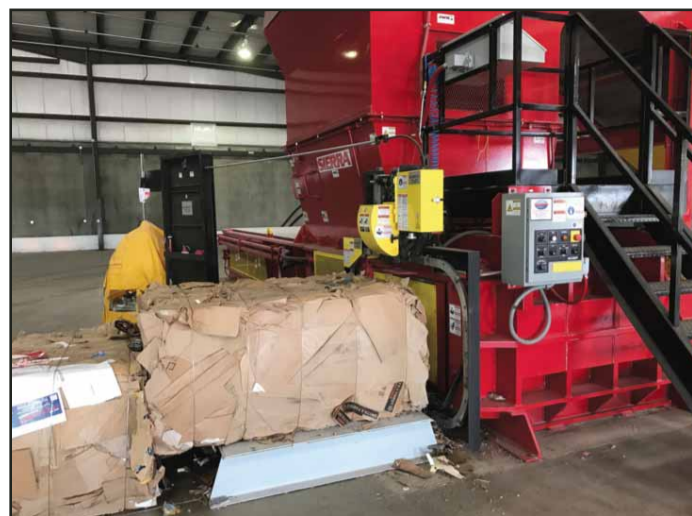
He noted that during installation, it is important that a user be actively involved, to understand the basics of the equipment. “For instance, regularly scheduled maintenance will allow the equipment to operate smoother and longer. Regardless of market conditions, our goal is to help customers increase their bottom line. We believe the best way to accomplish that is to always stay in close communication with our clients about the products and service we offer, relative to the needs of their particular operation.”

Sierra manufactures heavy duty high quality two ram balers and conveyors for MRFs, recycling centers, waste processors, and scrap metal recyclers. Sierra two

ram balers handle between 200 to over 6,000 tons of material per month, depending on the model and other factors such as the type of material involved and hours baling per day. Sierra’s two ram balers have standard features such as energy efficient flooded suction power units with standard kidney loop filtration, fully lined with ½”

AR 450 liners with a tongue and groove floor, 1 ½” thick tool steel shear blades with four cutting edges, shimless “hold down” adjustments, bale separation/oversize bale release door, operator’s platform, bale eject table, “and many other standard features that are options on other balers,” said Brian Mihm, director of sales. “Sierra balers and conveyors are set up and fully tested before shipment, to speed up the installation and start-up process. Other features that expedite the installation process are hard piping along the baler – with flexible hosing between the baler and power unit, a bolt on ejector assembly, plug and play electrical connections, and conveyors shipped pre-wired with the belt installed,” Mihm stated.

He expressed how he believes “this industry is trending toward cost savings with items such as power units that are more energy efficient, machines that run without an operator, programs that allow users to track electrical consump-



Sierra International Machinery, LLC

tion, and materials that are baled per shift and average tons per hour per material, downtime, wire consumption, etc.”

“One of the most important things a potential buyer needs to look at when purchasing equipment is the company’s commitment to parts and service. Sierra believes in stocking parts for all equipment from small electrical parts to motors, pumps, and cylinders. Sierra also stocks parts on the East and West coast with service technicians located throughout the country. This allows Sierra to reduce customer downtime when problems arise,” he concluded.

Sierra also provides material handlers for the waste, recycling and scrap metal industries, baler/loggers and shear/baler/loggers for the scrap metal industries, and is also the exclusive North American distributor for Macpresse, high volume auto-tie balers, shredders and conveyors.




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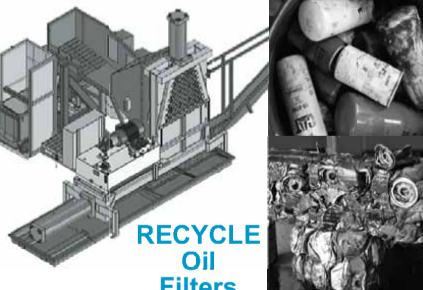
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EPA agrees with San Jacinto River waste cleanup action

The U.S. Environmental Protection Agency (EPA) has been reached an agreement with International Paper Company and McGinnes Industrial Maintenance Corporation to perform a remedial design for the San Jacinto River Waste Pits Superfund Site selected remedy. The selected cleanup action addresses the potential dangers posed by dioxin contamination at the site in Harris County, Texas.

EPA administrator Scott Pruitt said, "EPA will ensure that the remedial design removes all the contamination as quickly and safely as possible and permanently protects the health and safety of the surrounding communities and the San Jacinto River."

The EPA's cleanup plan, with support from state partners and the U.S. Army Corps of Engineers, includes installing engineering controls before excavating approximately 212,000 cubic yards of dioxin contaminated material for disposal. The estimated cost for the remedy is \$115 million, representing a reasonable value for the cost incurred.

The agreement is a result of expedited negotiations between EPA and representatives from both International Paper Company and McGinnes Industrial Maintenance Corporation for design of the cleanup. The remedial

design is estimated to take about 29 months to complete to ensure waste is safely and properly contained during construction and removal. The design work will be performed by the companies under the oversight of EPA and Texas Commission on Environmental Quality. The current quarterly cap inspection and maintenance program will continue while the remedial design is being completed.

The final cleanup plan considers the ever-changing San Jacinto River, which encroaches on the site, while protecting important downstream resources including the Galveston Bay estuary.

EPA added the San Jacinto River Waste Pits Superfund Site to the National Priorities List of Superfund sites in 2008 after testing revealed contamination from dioxins and furans near the waste pits. The site consists of two sets of impoundments, or pits, built in the mid-1960s for disposing solid and liquid pulp and paper mill wastes that are contaminated with dioxins and furans.

While the remedial design is ongoing, the U.S. Department of Justice and EPA will begin negotiations with the potential responsible parties to enter into a consent decree regarding construction of the remedy.

Sonoco president retires; Rob Tiede named CEO elect

Sonoco, a large global diversified packaging company, announced president and chief executive officer M. Jack Sanders retired in April, following a 30 year career with the company. Sonoco's board of directors has named Robert C. Tiede, who currently serves as the company's executive vice president and chief operating officer, as chief executive officer-elect.

Since joining Sonoco in 2004, Tiede has led all of Sonoco's global industrial, consumer and protective packaging operations, while spending the bulk of his tenure building the company's consumer-related businesses. These combined businesses have grown sales by approximately 80 percent and improved operating profits by 125 percent since 2004.

Tiede joined Sonoco as president of Sonoco CorrFlex following the 2004 acquisition of CorrFlex Graphics' point of purchase merchandising display and packaging business. In 2007, he became division vice president and general manager of the company's flexible packaging division and later added responsibility for all of the company's consumer packaging businesses. He became senior vice president in 2013 and in 2015 added responsibility for the company's protective solutions and reels businesses.

Since Sanders took over as chief executive officer in 2013, Sonoco has seen GAAP earnings grow by 46 percent, while EBITDA margin has improved by 140 basis points and return on net assets employed (RONAE) has expanded from 7.6 percent to 11.1 percent. Sonoco has also returned approximately \$925 million in cash to shareholders, in the form of dividends and share repurchase, while providing a 104 percent total return.

A graduate of Louisiana State University with a Bachelor of Science degree in finance, Sanders joined Sonoco in 1988 as national sales and marketing manager for the company's reels business.

Sanders was elected a corporate officer and named vice president of Industrial Products, North America, in 2001. He was subsequently named vice president of Global Industrial Products in January 2006 and assumed responsibility for all industrial converting businesses as senior vice president in July 2007. In 2008, Sanders was named executive vice president of Industrial, with global operating responsibility for the company's integrated industrial businesses. Sanders became executive vice president of Sonoco's global consumer businesses in 2011 and was chief operating officer in 2012.

Chinese ban

■Continued from Page B1

contaminated material from materials recovery facilities, thereby improving overall recycling efficiency.

Additional Steps to Take

In October 2017, Chao began receiving calls to find alternative countries willing to take his clients' garbage. "I called recyclers in Malaysia, Vietnam, Indonesia and India. Some of the U.S. companies are starting to ship to

these countries, but the garbage is still piling up," Chao said. "These countries simply can't make up for China's void." On top of that, the profit margins are much lower given the higher shipping costs and the lower prices for garbage with lower demand.

"My view is that these countries will never fill China's absence," Chao said. "The U.S. will just have to deal with more garbage, which means more landfills, more incineration centers and many new processing centers will pop up that can convert garbage into reusable raw materials."

Chao said that, in short, the U.S. needs to process its own garbage.

"We need to take responsibility for our mess, our garbage, and take it seriously," Chao said. "These are opportunities that waste management companies will have to get involved in. They know how to collect it, separate it, burn it, and bury it, but don't know how to turn, say PET, into reusable raw plastic. I also see opportunities where the Chinese will setup processing centers in the U.S. They'll use their expertise, Chinese-made equipment, and experience to possibly setup joint ventures with waste management companies to establish major processing centers throughout the U.S."

Chao also envisions paper and plastic recycling to shift to high-tech artificial intelligence and robots as the U.S. will need "cleaner" garbage with less contaminant in it.

"Corporations, instead of dumping their garbage to third parties, will manage their own garbage, looking at ways to

reuse them. This means that non-traditional players like Amazon, Ford Motor, and Boeing may get involved in garbage not just for themselves but for the general public."

The Long-Term Impact

As communities across the U.S. continue to grapple with the impacts of the China recycling ban, they will need to find new ways to locally manage their paper and plastic recyclables.

"Our hope is that municipalities, NGOs, local materials recovery facilities and brand-owner facilities in communities impacted by the China ban can take advantage of the insights we have gained through the course of the expansion of the Hefty EnergyBag program," Pypers said. "We believe mechanical recycling should be utilized to its full extent whenever economically and environmentally feasible. Recovery alternatives such as the Hefty EnergyBag program also play a role for communities in need of local diversion solutions for plastics they are unable to mechanically recycle."

Chao said he believes China will still take the higher-end garbage like metals but the contaminant restrictions will be much higher. "This could continue for another 10 years until China shores up its metals supply from their One Belt One Road initiative," Chao said. "For the U.S., it means taking recycling more seriously. We'll see state governments taking more action of restricting reusable plastic bags, straws, etc. And we'll see a new industry emerge – the recycling and processing of reusable raw materials."

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- AUG Solar
- SEP Containers
- OCT Magnets

Georgia Bill HB 785 supports recovery of all plastics

Georgia's House and Senate passed HB 785. The American Chemistry Council's Plastics Division welcomed the legislation and issued the following statement, which may be attributed to Craig Cookson, senior director of recycling and energy recovery:

"America's plastics makers applaud the passage of HB 785 in Georgia. This new legislation makes Georgia the third state legislature (after Florida and Wisconsin) in less than a year to approve legislation that creates a welcoming environment for innovative businesses to convert post-use non-recycled plastics into useful fuels, chemicals, or feedstocks for new plastics. This legislation recognizes the value of non-recycled plastics and the importance of keeping these materials out of landfills and in productive use.

We're pleased to see legislation that attracts new businesses and supports the creation of new jobs by treating post-use plastics as valuable raw materials for "manufacturing" and not as "waste." In addition, HB 785 makes clear that facilities which convert post-use plastics into liquid fuels, chemicals, waxes and lubricants are correctly regulated as manufacturing operations and

not mischaracterized as solid waste management facilities. We applaud Representative Nix and Senator Harper for sponsoring this important legislation, and we urge Governor Deal to sign it.

With Florida, Wisconsin, and now Georgia taking steps to modernize their laws, more and more lawmakers are recognizing the economic value of post-use plastics and undertaking important legislative changes. HB 785 removes regulatory barriers to implementing innovative technologies to help ensure that these plastics are converted into new products. We congratulate these states for their leadership in plastics recycling and recovery, and look forward to additional states making similar progress.

It's estimated that converting Georgia's non-recycled plastics into energy could provide enough fuel to power more than 357,700 cars every year. Experts also determined that converting non-recycled plastics in Georgia into petrochemical feedstocks and fuels could support 11 facilities and generate \$94 million in economic output each year."

Cascades reports strong annual net earnings for 2017

Cascades Inc. reported its unaudited financial results for the three-month period and the fiscal year ended December 31, 2017.

2017 Annual Highlights

- Sales of \$4,321 million (compared to \$4,001 million in 2016 (+11 percent))

- Operating income of \$175 million (compared to \$221 million in 2016 (-21 percent))

- OIBD of \$390 million (compared to \$413 million in 2016 (-6 percent))

- Net earnings per common share of \$5.35 (compared to net earnings of \$1.42 in 2016)

- Operating income of \$178 million (compared to \$211 million in 2016 (-16 percent))

- Net earnings per common share of \$0.72 (compared to net earnings of \$1.21 in 2016)

- Net debt of \$1,522 million as at December 31, 2017 (compared to \$1,532 million as at December 31, 2016) and net debt to adjusted OIBD ratio 3 of 3.6x, down from 3.8x at year-end 2016.

Mario Plourde, president and chief executive officer, commented: "Our fourth quarter results reflect year-over-year improvements in shipments, sales, and operating income on a consolidated basis. This was driven by solid performances from our containerboard division and European subsidiary Reno de Medici, where more favourable pricing and mix outweighed the impact of higher average raw material costs. In

the case of containerboard, results also benefited from the consolidation of the Greenpac Mill results beginning in the second quarter of 2017. The specialty products segment delivered results that were below prior year levels due to a lower contribution from recovery and recycling activities. Our tissue division continued to face challenging market conditions in the fourth quarter, which resulted in production downtime to manage inventory. These factors, combined with a less favorable sales price and product mix, higher raw material prices and costs related to the ramp up of the new Oregon converting facility, impacted sales and profitability levels in this segment.

"Sequentially, consolidated fourth quarter results reflected a less pronounced seasonal contraction than in prior years. This was primarily driven by results in our containerboard division, which generated increases in sales and operating income compared to the previous quarter, reflecting lower raw material prices and healthy demand. European boxboard operations also performed well, highlighting stronger business conditions, while results in our specialty products division remained relatively stable. Finally, our tissue segment performance was negatively impacted by lower volumes related to both seasonal demand variations and difficult market conditions, and a less favourable sales price and product mix".

NOVA Chemicals recycles over 57,000 pounds and earns EPS recycling award

Recycling programs for EPS, a foam used to protect products in transportation, food packaging, and construction materials, have been growing for nearly two decades.

In part, the growing success of EPS recycling can be attributed to companies like NOVA Chemicals, which has been creating innovative solutions for collecting EPS for recycling for the last five years. That's why the company is being honored with the EPS Industry Alliance's annual Excellence in EPS Recycling award. Judged by an expert panel including Keep America Beautiful, Packaging Digest, More Recycling, and GreenBlue, this award recognizes outstanding efforts to advance EPS recycling. To date, NOVA Chemicals has collected for recycling more than 57,000 pounds of EPS.

NOVA Chemicals kicked off its program in 2011 with an employee campaign "Bring Your Foam From Home." This campaign educated employees on the sustainability of EPS while encouraging them to bring their "foam from home" for recycling. The successful campaign resulted in NOVA Chemicals installing its first permanent collection bin a year later. In 2013, a pilot public education awareness and collection program was developed in partnership with Pennsylvania Resources Council (PRC), a nonprofit environmental organization and Appliance Warehouse (AP), a local retailer. This partnership provided opportunities for the general public to drop off EPS packaging material at a number of PRC Hard to Recycle (HTR) events. More than 20,000 pounds of EPS packaging foam material collected from these events was transported and densified at AP for recycling.

A public education and awareness program was a key component for introducing EPS recycling to the general public. NOVA Chemicals and PRC included EPS in an extensive promotion campaign including print media, televised news coverage and targeted social media. EPS recycling has become a permanent material stream for collecting at all PRC collection events in Western Pennsylvania. In addition, NOVA Chemicals' employees and families have consistently participated as volunteers at numerous PRC HTR events, totaling nearly 900 volunteer hours. In 2014, the partnership with PRC resulted in the design and unveiling of a self-service EPS collection bin that is fabricated and commercially available through RecyclingBin.Com. The bins are in use in many places in the U.S.

The EPS Industry Alliance (EPS-IA) received a record number of nominations for the award this year. "The judging panel definitely had a tough job," said Brenda Pulley, senior vice president, recycling program, Keep America Beautiful.

Many environmental stewards were considered for this year's award, including: Foam Fabricators, for its EPS mail back campaign; HIRSCH, for creating Thermozell, a recycled-content EPS construction material; Insulfoam, for recycling 4,150 tons of EPS in 2017, including improvements with their scrap yield; Plasti-Fab Ltd./PFB Corporation, for instituting a recycling program in Airdrie, Alberta; Polystyvert, for creating a closed-loop EPS recycling technology; and PPRE Forevergreen, for providing ex-convicts with the knowledge to work in green industries through EPS recycling.

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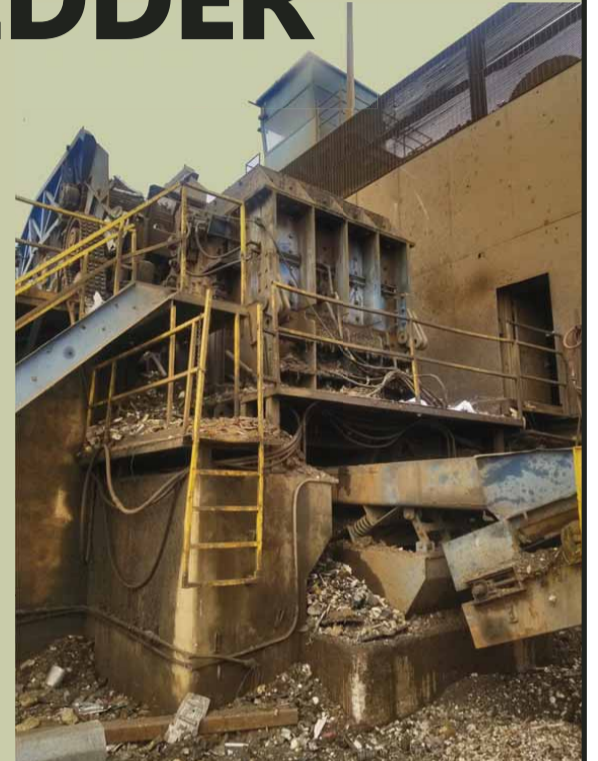
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