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# Decreased municipal solid waste challenges the recycling industry

by MARK HENRICKS

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After nearly a half-century of strong and steady growth, the total volume of municipal solid waste (MSW) declined from 2005 to 2010 as per capita waste generation, which had been flat for nearly two decades, also turned downward, according to figures from the Environmental Protection Agency (EPA). If it continues, the shift could mean big changes in store for recyclers.

Whether a blip or a sign of things to come, the swing is historic. The EPA shows a total of 88.1 million tons of MSW was generated in 1960, a rate of 2.68 lbs. per person per day. As the U.S. population swelled from 181 million in 1960 to 296 million in 2005, the total grew to 252.7 million tons of MSW annually, or 4.67 lbs. per person per day. Equally more significant is the leveling off of growth in the last decade. Waste generation grew by 34 million tons from 1990 to 2000 but only 7 million tons in the last decade.

Moreover, starting about 1990, the per capita figure leveled off. After increasing steadily to 4.57 lbs. per person per day – a 70 percent increase in 3 decades – per capita waste generation leveled off. It increased slightly during the 1990s, to 4.72 lbs. per person per day in 2000, before declining during the new millennium's first decade to 4.43 lbs. per person per day in 2010.

Through most of the period during which per capita MSW generation stayed the same or fell, overall MSW generation



continued to grow. But the 2005 figure of 252.7 million lbs. currently represents the all-time peak for MSW generation.

Recycling rates have changed even more dramatically during this time, going from 5.6 percent of MSW in 1960 to the current national average of 34.1 percent. That means there is still considerable room for increasing recycling without any increase in the volume of MSW. But the prospect of less municipal solid waste plus changes in the content of the MSW stream does raise questions for recyclers.

Trend or Blip?

Before addressing the possible effects of a long-term decline in MSW, the question has to be asked: Will this continue? Many people don't think so. The 2005-

2010 decline is due to the economic slow-down, according to Darby Hoover, a senior resource specialist with the Natural Resources Defense Council in New York City. "What that shows is a decrease in the amount of products purchased and consequently a decrease in the amount of packaging," Hoover said. "We have a dip in the amount produced when the economy dips just because there's less stuff in circulation." Hoover anticipates a return to growing overall MSW generation as the economy improves.

However, some waste experts think there's more to it. "There used to be a fairly tight correlation between the economy and generation of waste material,"

See SOLID WASTE, Page 4

# NPE2012 collects over 260,000 lbs. of scrap

For five days, the NPE2012 International Plastics Exposition transformed the Orange County Convention Center (OCCC) in Orlando, Florida into a virtual manufacturing city, generating many tons of industrial scrap, packaging and other post-consumer waste. None of it, however, ended up in landfills, according to the OCCC

and SPI: The Plastics Industry Trade Association, which produces the triennial NPE.

Final figures provided to SPI by Maine Plastics, Inc., the official recycler for NPE2012, indicate that the production scrap generated by machinery operated on the show floor by 56 exhibitors amounted to 260,208 lbs. This was more than double the 125,040 lbs. total for NPE2009, where 45 exhibitors participated.



A rule set by SPI required that scrap generated during NPE2012 by exhibitors not participating in the NPE Recycles program could not be disposed of as waste. These exhibitors were responsible for having their process scrap delivered to the OCCC loading dock for sorting off-site.

NPE week also generated large quantities of post-consumer solid waste – 908,620 lbs., according to the OCCC. All of this was recycled except for 157,700 lbs.

of food waste, which went to landfills.

In addition to having more participants and recycling more scrap than in 2009, the 2012 NPE Recycles program collected 67 percent more scrap on a perexhibitor basis, noted A.J. Janosko, SPI's director of trade show operations. "Individ-

ual exhibitors generated more scrap during NPE2012 than in 2009 chiefly because they had more machines operating on the show floor," Janosko said. "The economic and logistical advantages of exhibiting in our new venue in Orlando, along with the improved business climate, encouraged equipment companies to invest more in their booths, resulting in what SPI called 'The Return of the Machines'."

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# Michigan misses opportunity to recycle more electronics

a needed boost from the Electronic Takeback Law back in 2008 but little has been done since.

The E-waste Takeback Law requires manufacturers and distributors to provide free and convenient recycling opportunities for Michigan residents.

Currently, Michigan residents recycle about 1.6 lbs. per capita of household electronics. Compared to the 4.2 lbs. per capita recycling rate in Wisconsin, Michigan could use another boost.

In an effort to drive recycling rates of consumer electronics up, the Michigan Recycling Coalition (MRC) facilitated discussion among key stakeholders to develop a set of recommendations.

The resulting document, "The State of Electronics Recycling in Michigan," highlights the impact of the current law, compares Michigan's efforts to those of other states and makes a number of recommendations for improvement.

Among the recommendations for increasing the recycling of covered electronic devices is the need to establish enforceable recycling goals, potentially based on market share data.

According to Kerrin O'Brien, MRC executive director, "The takeback law requires manufacturers to provide free and convenient recycling for their products, but without an enforceable goal there's nothing concrete to drive manufacturers to

Computer and television recycling got invest in recovering more electronics here in Michigan. So, they're taking their business elsewhere," said O'Brien.

"For the state of Michigan to have a successful electronics takeback program it has to be easy, free and convenient for all residents. A good program will benefit both the economy and environment," said Todd Gibson of Vintage Tech Recyclers, an Illinois-based recycler with programs in Michigan and a new operation in Wayne County.

The Natural Resources and Environmental Protection Act 451 of 1994, Part 173 Electronics of 2008, also requires leaders of the Michigan House and Senate to convene an Electronic Waste Advisory Council.

While members were appointed to the Council early on, it has never met to discuss or evaluate the program.

The MRC recommendations were submitted to the Governor, Legislature, and Department of Environmental Quality in March of this year on behalf of the MRC, its board of directors and members.

According to the report, "Electronic products contain hazardous materials but also, valuable resources. The proper and safe management of these products at the end of their lifecycle is an ongoing concern and opportunity."

For a direct link to the full report, view this article on www.AmericanRecycler.com.

# Pennsylvania uses \$450,000 in grants to deter dumping

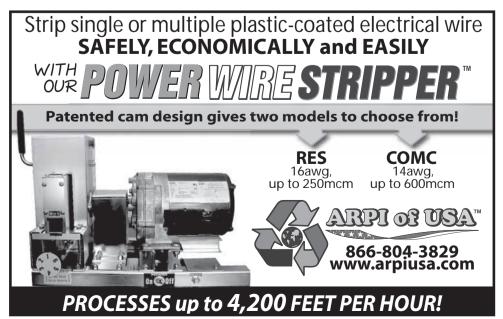
The Department of Environmental Protection (DEP) has awarded a \$449,182 grant to Keep Pennsylvania Beautiful to identify illegal dumpsites in Pennsylvania, spread awareness of improper waste disposal and promote environmental stewardship.

The funding will help Keep Pennsylvania Beautiful complete its twoyear statewide illegal dump survey by focusing on Susquehanna, Wyoming, Wayne, Pike, Northampton and Lehigh counties, the final six counties in the survey. This survey will be compiled into a report that will provide a full analysis of illegal dumping for all 67 counties over 7 years.

The survey is being used to educate state, county and local officials about how to combat illegal dumping in their communities by organizing cleanup events, municipal waste collections and recycling programs.

Part of the grant will be used to promote and administer Keep Pennsylvania Beautiful's adoption program, which maintains more than 300 municipal roads, communities, parks, neighborhood blocks, greenways, waterways and trails.

Funds will also be directed toward continuing the Litter-Free School Zone program, the Great American Cleanup of Pennsylvania and the state's participation in the International Coastal Cleanup.





Page A4, July 2012 **American Recycler** 

### Florida recycling center opens

Republic Services held the grand opening of its newly constructed state-ofthe-art regional recycling center located in northwest Jacksonville. The facility will serve the residents and businesses throughout a multi-county area, including Duval, St. Johns and west to Alachua County and beyond, as well as areas of south Georgia including Savannah.

This recycling center represents a major investment by Republic Services in technology with advanced sorting capabilities, making the process of adding these materials back into new products easier.

The 70,000 sq.ft. facility will be able to process more than 65,000 tons of recyclables per year and the facility was designed to allow for expansion as recycling grows beyond the region and the increased processing can be added as quickly as demand requires.

The Eco Center at the facility will be available to teach the importance of reducing waste and to explain what happens to recyclables once they leave homes and businesses. Tours and training will be available at the Eco Center to students, professionals and community groups and a full range of educational opportunities will be available.

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# Solid waste

**■**Continued from Page 1

said Chaz Miller, who as director of state programs oversees recycling for the Washington-based National Solid Wastes Management Association. "That correlation isn't as tight as it used to be, except for construction and demolition debris, which is very closely connected to the economy."

Miller points to EPA figures showing generation of durables, such as furniture and appliances, increased every year during the decade. "You'd think durables would be most affected by the economy because they tend to be bigger ticket items," he said. "But apparently they haven't been."

One thing that's happening, Miller said, is that people are using products that come in lighter packaging. Replacing paper, glass and metal packaging with plastic reduces the weight of packages, he noted. Another long-term trend is toward declining volumes of newsprint, magazine, writing papers and office paper. The contribution of these sorts of papers to MSW totals have declined by 15 million tons per year in the last 10 years, said Miller.

The overriding trend in recent years is simply less waste going to landfills, said Jeremy O'Brien, director of applied research for the Solid Waste Association of North America in Silver Spring, Maryland. "That trend goes along with what we see and hear from our members," O'Brien said. "Municipal waste tonnages we're seeing at landfills certainly are not increasing. They're declining.'

Lower tonnages being deposited into landfills has important financial implications for recycling operations, because these are typically supported by revenues from tipping fees. "Revenues are going down," said O'Brien. "That means we have to make our recycling systems more efficient." One way many recycling systems are doing this initially is by making curbside collection less frequent, going from weekly to every other week, he said.

#### **Changing Composition**

The shift toward more plastic packaging and less newsprint and office paper also has implications for recyclers. The lower bulk density of plasticmore revenue challenges, because newsprint and office papers are the dominant economic contributors to many municipal recycling facilities. papers," Miller said. "There's less paper and less overall contribution to MRF

paper that have traditionally supported more and more by bits and bytes than by paper," he said. "And that material is not coming back. Those are irreversible societal changes."

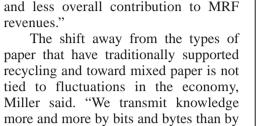
#### **Recycling's Challenges**

One possible result of the changing composition and loss of tipping fees is that recycling programs will be more transparent about the cost of their efforts. They may have to find ways to convince taxpayers to financially support them.

Meanwhile, however, it's still not certain that a rebounding economy won't return waste generation to pre-2005 levels. The trend thus far is young, and it's hard to separate out transitory economic effects from possibly longerterm shifts in the amount and type of what we dispose of. Hoover, for one, thinks the last recession is the best explanation. "When EPA releases total MSW generation data for 2011, I expect those numbers to be the same or slightly higher than in 2010," she said. "But I expect to see recycling rates increasing also."

But others see the signs of a more significant, probably permanent change that may require major changes in the way recyclers operate. That could be for the best, O'Brien said. "With every challenging time there are opportunities," he said. "This is our opportunity to really document the true cost and true benefits of curbside recycling and other solid waste management options. Then let the public make good rational decisions on how we should be spending our money on these programs."

laden waste streams means changes in everything from recycling facility conveyor belts to balers. It also means "Now you're seeing a shift to mixed The shift away from the types of







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## Marketing coop launched in New Mexico

There is strength in numbers – and that's the philosophy behind boosting income for small communities that recycle. "By banding together, and working under our new marketing co-op, the New Mexico Recycling Coalition (NMRC), can help even small recyclers take advantage of higher pricing for their recyclables," said English Bird, NMRC executive director.



The NMRC recently made its first sale of recyclable materials via the R3 (Rural Recycling Resources) Marketing Co-operative. Based on the farm co-operative model, the recycled material co-op aims to bring the best value to smaller community recycling programs.

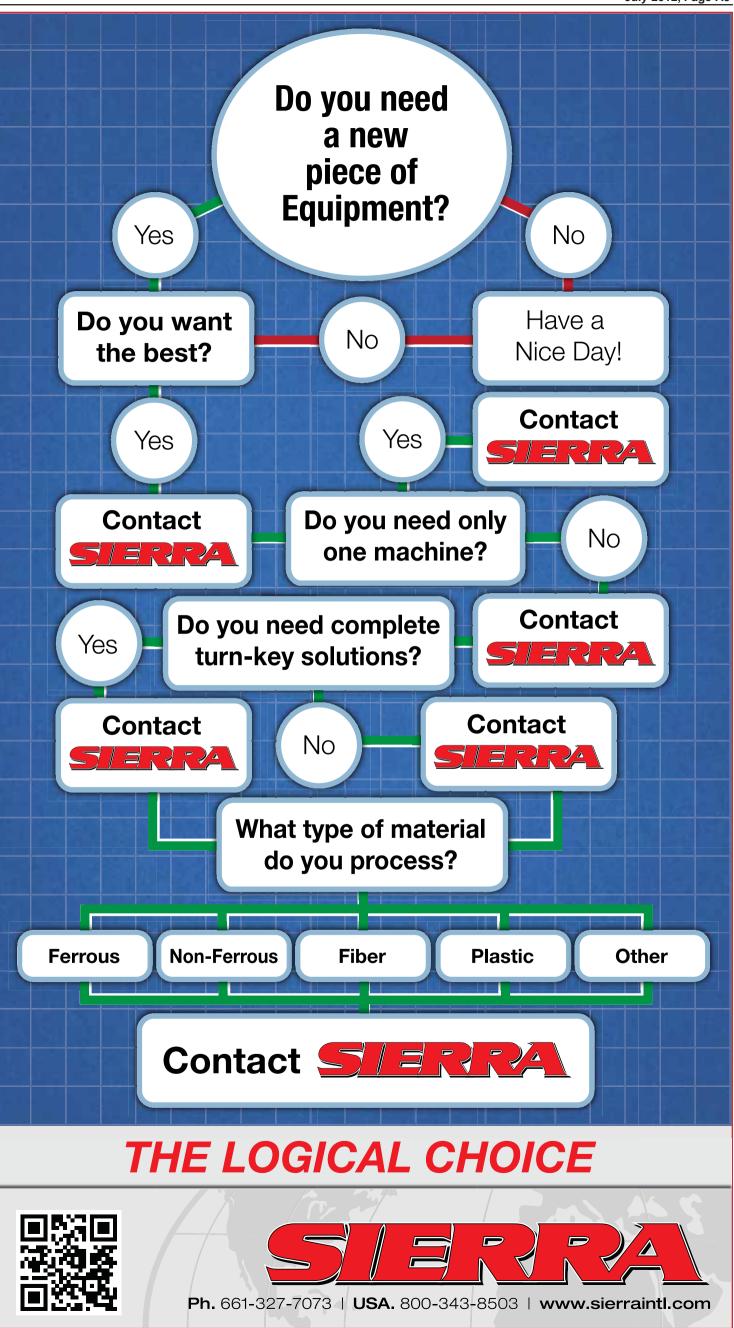
The newly created recycling hub based at La Luz Transfer Station in Otero County generated the first truckload of cardboard using the R3 co-op. The co-op currently has three community members with more expected to join now that the program is launched.

When assessing the need to create the co-op, NMRC found that the final sale price for the same recycled commodities varied widely by community. It also discovered that some communities had trouble marketing harder-to-recycle and lower volume materials such as plastics.

"R3 is able to provide a lot of value to smaller-scale recycling programs. We are able to document the competitive bid process, get the best prices, track down payments and ensure that our rural and smaller communities are getting marketrate for their recyclables," said Bird. "With our longer distances to end-markets, using the co-op model really makes sense for New Mexico recycling programs."

The co-op was created as part of NMRC's multi-tiered Rural Recycling Development project funded by a grant from the Department of Energy.





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# ARCA Advanced Processing receives award

ARCA Advanced Processing, LLC (AAP) has received a Pennsylvania 2012 Governor's Award for Environmental Excellence for the installation of the first UNTHA Recycling Technology (URT) plant in the United States. The Governor's Awards for Environmental Excellence are presented each year by the Pennsylvania Department of Environmental Protection to highlight the best in environmental innovation and expertise throughout the Commonwealth. AAP is one of seventeen award winners honored in 2012.

AAP, a joint venture between ARCA and 4301 Operations, LLC, provides appliance recycling services for GE Appliances in a 12 state region on the East Coast, as well as for several electric utility companies. The URT system processes entire refrigerators and freezers to remove over 95 percent of the blowing agent from polyurethane foam insulation, significantly reducing the emissions of ozonedepleting substances and greenhouse gases. Compared to the typical refrigerator recycling process, the URT system recovers approximately an additional 47 pounds of material that was originally destined for a landfill.

"The installation of the first URT technology in the U.S. at our Philadelphia recycling center has allowed us to recycle more than 70,000 refrigerators in conformance with U.S. EPA Responsible Appliance Disposal (RAD) standards, creating more than 50 green collar jobs in the process," said Brian Conners, president and chief operating officer of AAP.

# Real Recycling opposes bottle bill for Massachusetts

Real Recycling for Massachusetts, an organization of citizens, businesses, trade organizations and unions that oppose a costly and inefficient expansion of the bottle bill, outlined the top 10 reasons why the bill is bad for Massachusetts. The bottle bill measure, which has repeatedly failed to earn support from lawmakers, is currently under review again in the state legislature.

"In a tough economy the last thing Massachusetts consumers need is another tax and higher grocery prices to pay for a costly recycling system that doesn't work," said Chris Flynn, president of the Massachusetts Food Association and a member of Real Recycling for Massachusetts. "Time and time again, state lawmakers have resisted moving bottle bill expansion forward, and for good reason: this legislation would lead to higher grocery prices, create an added burden on small businesses, and place high quality jobs in jeopardy, all while having a negligible impact on our state's recycling rate."

Among the top 10 reasons why the bottle bill is bad for Massachusetts:

•The bottle bill is an unnecessary tax for consumers. The \$.05 fee that would be added to every bottle and can sold in the Commonwealth is a new tax when the economy is still struggling. Proponents estimate that it would bring in almost \$20 million per year from unredeemed containers.

•The bottle bill hurts local businesses. Expanding the bottle bill would cost retailers, grocers and beverage companies an estimated \$58 million each year in additional operating costs.

•The bottle bill puts thousands of Massachusetts jobs at risk. An expanded bottle bill would impact 3,700 high quality beverage industry jobs in the Commonwealth.

•The bottle bill has little positive environmental impact. Expanding the bottle bill would raise the state's recycling rate by a negligible 1/8 of one percent (0.12 percent).

•The bottle bill is much more expensive than more comprehensive, effective recycling programs. The existing bottle bill costs 3 to 4 times more than a comprehensive curbside recycling program, and an expanded bill would cost about 10 times more. It would also create added costs in the establishment of a new, separate system for acquiring empty bottles and cans from retailers and restaurants all over the state.

•Expanding the bottle bill would distract the Commonwealth from more effective measures to improve recycling. Expanding curbside pickup, making it easier to recycle in public places and supporting comprehensive litter prevention programs are all better improvements.

•The existing bottle bill was approved nearly 30 year ago before Massachusetts adopted widespread curbside and other recycling programs. Today, nearly everyone in the Commonwealth has curbside recycling pickup, access to an area to take their recyclables or another similar program that makes it easier and more convenient to recycle – by including a wide range of paper, metal, plastic, glass products and packaging.

As an alternative to the bottle bill, Real Recycling for Massachusetts advocates for expanded recycling through measures that are more effective and less burdensome, including expanding curb-side pickup, making it easier to recycle onthe-go, making recycling accessible in more public places such as parks and arenas, and supporting comprehensive litter prevention programs.

### Melissa Innes joins Recycling Reinvented

Recycling Reinvented, a nonprofit committed to advancing recycling rates of packaging and printed paper in the U.S. though an extended producer responsibility (EPR) model, hired retiring Maine State Representative Melissa Innes as outreach director.

Led by a diverse group of board members from the public and private sectors, including noted environmental advocate Robert F. Kennedy, Jr., and president and CEO of Nestle Waters North America Kim Jeffery, Recycling Reinvented aims to create an efficient recycling model for the U.S. This model can better meet the needs of the American marketplace by increasing recycling rates, reducing government spending and using private sector efficiencies to reduce the overall cost of recycling. With EPR, businesses can reuse the valuable materials in their product packaging, ensuring they have stable material streams for new products while creating efficiencies and reducing materials costs.

Recycling Reinvented takes a broad and collaborative approach, working with brand owners, packaging manufacturers, processors, material recovery facilities, haulers, labor, and local and state governments. Innes will harness support to advocate for EPR as the preferred method for effective and sustainable resource management.

"Our current recycling system is not keeping up pace with supply and demand. With EPR, many nations have achieved recycling rates that double those in the United States," said Innes, "and they have accomplished this when government sets a goal and gives the private sector flexibility to meet it. There is incredible opportunity for U.S. manufacturers to adopt a similar approach, and even go beyond increasing recycling rates," Innes continued. "A recent recycling study shows that if the U.S. could increase its recycling rate to 75 percent by 2030, it would create 1.5 million additional jobs."

# Connecticut passes state mattress recycling legislation

The International Sleep Products Association (ISPA) reported that the Connecticut Senate reached a compromise on legislation creating a used mattress recycling program, S.B. No. 89, by passing a solution that takes into account fundamental practical issues involved with designing and implementing an entirely new statewide recycling program.

ISPA has been working for a number of years to encourage responsible recycling of used mattresses and supports the development of legitimate recycling operations.

"We were able to reach a compromise with the Connecticut legislature on the mattress recycling bill. However, ISPA firmly believes that the best approach to efficient and legitimate mattress recycling lies in federal legislation. A federal recycling program would permit efficiencies and economies of scale

that are not possible at a state or local level, applying consistent collection and processing practices across the country, that would benefit all parties concerned by driving down recycling costs for both consumers and manufacturers while also increasing recycling rates," said ISPA president, Ryan Trainer.

Currently, ISPA is leading the push for a federal mattress recycling program. The Association is continuing to advocate for federal legislation with the goal to build a mattress recycling solution that is efficient for both consumers and businesses. To create a program that operates most efficiently, ISPA believes that this can be best achieved through a national program that addresses the needs of all – consumers, retailers and manufacturers – under one unified, consistent program.



# OriginOil Technology recovers 98 percent of hydrocarbons in oil and gas production water



This photo depicts samples of the three stages in which OriginOil first removed over 98 percent of hydrocarbons and other organics (measured by chemical oxygen demand or COD) in the first stage, and clarified the sample in the final stage, eliminating color (PtCo CU) by 99.8 percent.

OriginOil, Inc., developer of technology to convert algae into renewable crude oil, said that in a recent independent third-party testing OriginOil's algae harvesting process was able to remove 98 percent of hydrocarbons from a sample of West Texas oil well frac flowback water in the first stage alone. The results point to a potentially valuable application of the company's core water processing technology, originally invented for algae harvesting.

Frac flowback describes water used in a drilling process called hydraulic fracturing, or fracking. This test sample was taken from an oil well from which 200,000 gallons of oil-rich water flowed back over a period of two weeks. The water resources firm PACE Engineering supplied the sample and analyzed the results.

"The test results surpassed what we expected of OriginOil when we sent \$300 billion and \$1 trillion per year.

them the sample," said Andrew Komor, vice president for environmental water at PACE Engineering. "The first pass results showed not 70 to 75 percent removal of hydrocarbons as is typical of current technology, but 98 percent. We realized then that this could be a game-changer for the oil and gas industry."

Water is produced and used in large quantities in oil and gas operations. According to the U.S. Department of Energy, an average of three barrels of contaminated water is generated for every one barrel of oil produced.

In the United States, the average is seven barrels of water. Greentech Media reports that energy companies pay between \$3 to \$12 to dispose of each barrel of produced water, implying a potential world market value between \$300 billion and \$1 trillion per year.

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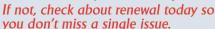
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# **ALTERNATIVE ENERGY**

# New solar photovoltaic modules used to charge electric vehicles in Michigan

Western Michigan University is utilizing Mage Solar modules for a 50 kW solar photovoltaic project on its Kalamazoo campus.

216 of Mage Solar's US-modules are mounted onto 18 individual customized poles in a parking lot across from the university's James W. Miller Auditorium. Each of the arrays can be adjusted individually within a range from vertical to 80 degrees. Students can therefore test how the tilt of the array impacts energy yield of the modules.

The system was designed, furnished and installed by The Green Panel, Inc. The company's team also customized inverter and charging station monitoring systems that will give real-time access to the system's performance data.

The project was funded by a grant from the Department of Energy and administered by the Clean Energy Coalition of Ann Arbor, Michigan.



The 50kW pole-mount installation is equipped with 15 electric vehicle charging stations and measures the impact of panel tilt in correlation to energy yield.

# Republic Services, Fortistar and Duke Energy dedicate newest landfill-gas-to-energy facility

Republic Services, Inc., Fortistar and Duke Energy dedicated a new, state-of-the-art landfill gas-to-energy plant in North Carolina with a ribbon cutting event at the site.

The facility began commercial deliveries of renewable power to Duke Energy Carolinas on February 16,

Republic Services, Inc., Fortistar Duke Energy dedicated a new, state-agreement.

Fortistar recently finalized the construction on the 11.5 megawatt renewable energy facility, called Concord Energy Renewable Gas to Energy Plant, at Republic Services' CMS landfill in Concord, North Carolina.

The Concord Energy facility utilizes landfill gas to fuel two Solar Taurus turbines, each capable of generating over 5.5 megawatts, and combined with the associated landfill gas conditioning and compression equipment, will meet the total electrical energy needs of nearly 7,700 North Carolina residences.

A man placed some flowers on the grave of his departed mother and started toward his car when his attention was diverted to another man kneeling at a grave. The man was praying with deep intensity and kept repeating, "Why did you have to die? Why did you have to die?"

The first man said, "Sir, I don't wish to intrude, but you're mourning more deeply than I've ever seen before. For whom do you mourn?"

The mourner replied, "My wife's first husband."

# Tools launched to test solar, wind energy potential

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) have developed new tools designed to test underutilized sites and contaminated land for solar and wind energy potential. The tools give local communities and land owners ways to evaluate sites for renewable energy potential without the need for technical expertise.

The alternative energy decision trees, leverage NREL's knowledge of renewable energy technologies and EPA's experience in returning contaminated lands to productive use.

The EPA estimates that nationwide there are approximately 490,000 sites and almost 15 million acres of potentially contaminated properties.

"Opportunities to install renewable energy systems on vacant properties can be found in every community," said Jared Blumenfeld, EPA's regional administrator for the Pacific Southwest. "Tapping sun and wind power at brownfield sites, rooftops, parking lots, and abandoned land could provide untapped gigawatts of clean energy."

The City of Richmond, California is serving as a pilot community for development of the tools.

In addition to opportunities in cities, thousands of potentially contaminated acres in less populated areas across the country could be put to beneficial reuse with renewable energy.

The tools can be used to evaluate individual or multiple sites, such as brownfields, Superfund and other hazardous waste sites, abandoned parcels, landfills, parking lots, and commercial or industrial roofs, depending on the technology.





### **ELECTRONICS**

# Report shows increase in e-recycling

The Consumer Electronics Association reported a 53 percent year-over-year growth for 2011 in the collection of gadgets – mobile phone trade-ins also increased for participants in their eCycling Leadership Initiative.

Overall, the initiative oversaw the collection and recycling of 460 million lbs. last year, compared with 300 million lbs. recycled in 2010. There are now more than 7,500 places where you can drop off electronics, up from 5,000 just 12 months ago.

This expansion is marked by Staples' (SPLS) and Hewlett-Packard's joint recycling program. Other major retailers, like Best Buy began their takeback program 3 years ago with the expectation that it could initially lose between \$5 million and \$10 million on the program. The program began turning a profit last year, proving that ecycling can be a viable business.

Readen Holding Corp's subsidiary Moho-Telecom began a joint venture with specialist consumer electronic product collector and processor, Zwipit, to start offering Zwipit's recycling program to their retail network and related websites.

An estimated 2,700 collection locations for used phones in the Netherlands, Belgium and France should be in place by October 2012.

### **CONSTRUCTION & DEMOLITION**

# California company fined for illegal dumping in federally protected wetlands

Humboldt County contractor Dennis Wendt of Wendt Construction resolved a federal lawsuit with the U.S. Environmental Protection Agency and U.S. Department of Justice following the construction company's unpermitted dumping of the equivalent of 200 large dump truck loads of material into federally protected wetlands crucial to neighboring salmon populations.

The wetlands are associated with Strongs Creek, which flows approximately 1.3 miles west to the Eel River, a priority resource for maintaining cold, freshwater habitat for salmon and steelhead. The Lower Eel River is considered

Humboldt County contractor Den-Wendt of Wendt Construction impaired under the Clean Water Act due to excessive sediment loads, low dissolved oxygen and high temperatures ironmental Protection Agency and that exceed water quality standards.

The illegal fill activities took place between 2005 and 2008 at two adjacent development sites, the Strongs Creek Plaza Site and the East Littlefield Property and impacted a total of 4.18 acres of wetlands. Wendt Construction will pay a \$170,000 penalty for dumping fill material into wetlands connected to Strongs Creek, a tributary to the Eel River located in the City of Fortuna.

As part of the settlement, the company will undertake a multi-year project

to restore the damaged wetlands, including the creation of vegetated pond that will support wildlife while filtering water and recharging the groundwater aquifer. Restoration will allow the creek to perform the important ecological functions of retaining soil and nutrients, attenuating floodwaters, and providing movement corridors for wildlife and habitat for the Northern red-legged frog, which is a threatened species in California.

The proposed consent decree for the settlement, lodged with the federal district court, is subject to a 30-day comment period and final court approval.

### Ceiling tile recycling expanded

Thousands of tons of old ceiling tiles will soon be diverted from local landfills thanks to a new agreement between Armstrong World Industries and Waste Management.

With the addition of more than 50 Waste Management material recovery facilities, and collection contracts with many of the nation's top construction companies, the new initiative is expected to significantly expand Armstrong's existing Ceiling Recycling Program.

The Armstrong Ceiling Recycling Program is the longest running program of its kind and enables commercial building owners to send ceilings from construction sites to an Armstrong ceiling plant as an alternative to landfill disposal. As an Armstrong Certified Construction & Demolition Processor, Waste Management will collect mineral fiber and fiberglass ceiling tiles that have been removed from commercial renovation and demolition projects. It will then store and prepare the tiles for shipment to the nearest Armstrong ceilings plant, where they will be used in the manufacture of new ceiling tiles. Armstrong designates new tiles made with high levels of recycled ceilings as Ceiling-2-Ceiling<sup>TM</sup> tiles.

Since the program began in 1999, Armstrong has recycled over 123 million sq.ft. of old ceiling tiles. This represents more than 16,000 roll-off containers of discarded materials that would have otherwise been taken to landfills.

# Broad Run now a certified C&D recycler

Broad Run Recycling in Manassas, Virginia, has been certified by the Institute for Certification of Sustainable Recyclers (ICSR). Broad Run Recycling is the first C&D recycling facility to achieve the ICSR certification by an ISO compliant, third party certification agency.

Broad Run operates a 26,000 sq.ft. plant with a daily capacity to process more than 1,500 tons of material. Broad Run Recycling's uses its own hauling business, Industrial Disposal Services, Inc. to pick up debris in and around Manassas including the Washington D.C. Metro area.



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### **PLASTICS**

# Los Angeles passes plastic bag ban and taxes paper

to impose a ban on plastic retail bags. The ordinance put in motion by the city council includes a ban on plastic retail bags and a \$.10 tax on shoppers for paper bags.

Californians generate more than 14 billion plastic bags annually, less than 5 percent of which are recycled.

To date, 48 California cities and counties have adopted ordinances banning single-use plastic bags, which are targeted for their contribution to litter, costly disposal and threat to the environment.

Analyses by City staff and others have determined that single use bags cost Los Angeles consumers and taxpayers more than \$75 million annually in higher grocery costs and pollution clean-up costs. Plastic bags have been found to be one of the largest and costliest contributors to lit-

The Los Angeles City Council voted ter and pollution in the Los Angeles River and Ballona Creek. Under the Clean Water Act, city tax/rate payers have been forced to spend an estimated \$10 million annually to clean up and keep plastic bags out of these impaired water bodies.

California has learned a lesson with regard to efforts to recycle plastic bags returned to grocery stores for recycling. The last assessment by CalRecycle places the statewide recycling rate for plastic bags at 3 percent, or just about 1,500 tons of plastic bags diverted from landfill through recycling.

By comparison, the local effort in Los Angeles (City and County), and the 47 other jurisdictions that have voted to phase out single use plastic bags, will eliminate nearly 17,000 tons of plastic bags from the litter and waste stream.

### Guidelines improve HDPE recycling

EuPR, the Brussels-based organization representing plastics recyclers in Europe, has developed new European ecodesign guidelines for HDPE bottles in order to improve HDPE recycling.

According to Christian-Yves Crépet, EuPR HDPE working group chairman, "HDPE is a very good and easily recyclable material." Today, approximately 300,000 tons of HDPE bottles are being recycled annually in Europe. Unfortunately, this only represents 10 to 15 percent of the HDPE waste generated in Europe.

In order to meet higher plastics recycling targets set out in EU legislation, more plastics material needs to go for recycling within the next five years. Regarding the eco-design, these EuPR guidelines have been developed with the aim of getting a good quality recyclate that can be used again in new products such as, for example, milk bottles with food contact recyclate grades according to existing EU legislation.

To review the new HDPE recycling guidelines, view this article on www.AmericanRecycler.com.

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### **PLASTICS**

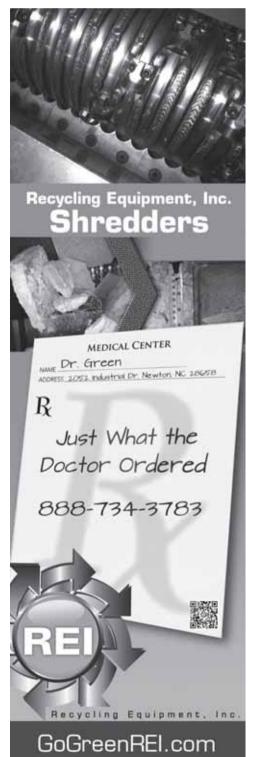
# Alpine begins accepting heavy plastics

Commerce City-based Alpine Waste & Recycling has begun accepting mixed rigid plastics for processing at their Altogether Recycling Plant, 645 W. 53rd Place, Denver, Colorado.

Alpine actively solicits mixed rigid plastics for recycling and was the first waste hauler in the Denver area to use natural gas trucks.

The mixed rigid plastics made of high-density polyethylene include heavy, over-sized items such as lawn furniture, five-gallon buckets, pallets and even dog houses or small sheds.

Alpine, which recently expanded its recycling plant, is able to handle the heavy plastics because Alpine has a long pre-sort line. Alpine also has an open layout and chutes built into the line that have the capacity to handle the plastics. Perhaps more importantly, Alpine instructs its drivers to leave their cabs and pick up large items that won't fit into typical recycling bins.





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Page A14, July 2012 **American Recycler** 

## **METALS**

### Timken breaks ground on \$225 million expansion

Officials of The Timken Company were joined by Ohio Gov. John Kasich, Sen. Rob Portman, Rep. Jim Renacci, Rep. Bob Gibbs, state Rep. William Batchelder and other state and local political leaders to mark the start of work on a \$225 million expansion of the Faircrest Steel Plant in Stark County, Ohio.

The investment by the specialty alloy steel and industrial components manufacturer is expected to improve the Faircrest plant's productivity, expand its product range and increase capacity to serve growing demand for Timken® specialty alloy steel bars.

A new ladle refiner and large-bloom continuous caster are the centerpieces of the steel plant expansion.

Targeted for start up in 2014, the new equipment is expected to increase the Faircrest plant's shippable capacity by 25 percent and enable the production of a broader range of large-diameter bars.

In 2011, the Timken Steel segment melted 1.7 million tons of scrap steel equal to approximately 1 million junk cars – and generated \$2 billion in sales of its custom-designed steel.

The company has invested steadily in its operations through the years, but this \$225 million investment at the Faircrest plant is the largest since the facility opened in 1985.

# OSHA cites New Jersey metal recycler

Occupational Safety and Health Administration (OSHA) has cited Park Stein Inc., doing business as Parkway Iron and Metal, for 3 repeat and 16 serious violations at the company's Clifton facility. OSHA opened an inspection in response to a complaint alleging hazards. Proposed penalties total \$77,770.

The repeat violations include the company's failure to provide proper personal protective equipment, conduct a hazard assessment of the workplace and provide hazard communication training. The citations carry \$21,560 in penalties. A repeat violation exists when an employer previously has been cited for

The U.S. Department of Labor's the same or a similar violation of a standard, regulation, rule or order at any other facility in federal enforcement states within the last five years. The company was cited for the same violations in March 2010.

> The violations involve the lack of a hearing conservation program, inadequate personal protective equipment, improper storage of gas cylinders, an inoperable alarm on a front-end loader, floor holes, missing platform handrails, a blocked fire exit, the removal of valves on compressed gas cylinders, the lack of lockout/tagout procedures to control machines' energy sources, powered industrial trucks left unattended, the lack

of valve caps on compressed gas cylinders and various electrical hazards. A serious violation occurs when there is substantial probability that death or serious physical harm could result from a hazard about which the employer knew or should have known. The citations carry \$56,210 in penalties.

Parkway Iron and Metal is a scrap metal recycling facility that employs 36 workers. The company has 15 business days from receipt of the citations to comply, ask for an informal conference with OSHA's area director or contest the citations and proposed penalties before the independent Occupational Safety and Health Review Commission.

### Peaslee appointed AIST president

Kent D. Peaslee, F. Kenneth Iverson Chair of Steelmaking Technology, Curators' Teaching Professor of Metallurgical Engineering and the associate department chair - undergraduate studies, Missouri University of Science and Technology, Rolla, Missouri, has been appointed president of the Association for Iron & Steel Technology (AIST) for 2012–2013.

AIST announced its new executive committee and board of directors during AISTech 2012, the organization's annual conference and exposition.

Also appointed as officers were:

•First vice president: Terry G. Fedor II, vice president – U.S. iron ore operations, Cliffs Natural Resources, Ohio.

•Second vice president: Glenn A. Pushis, vice president and general

manager, Steel Dynamics Inc., Butler, Indiana.

•Past president: R. Joseph Stratman, executive vice president, Nucor Corporation. North Carolina.

•Officer-at-large: Michael D. Garcia, chief executive officer, Evraz Highveld Steel and Vanadium, South Africa.

•Officer-at-large: George J. Koenig, president, Berry Metal Co., Pennsylvania.

president, U.S. Flat Rolled Operations, States Steel Corporation, United Pennsylvania.

Officer-at-large: Anton Lukac, vice

Treasurer: William C. King II, assistant corporate controller, United States Steel Corporation, Pennsylvania.

Secretary: Ronald E. Ashburn, executive director, AIST, Pennsylvania.

#### **Nucor declares** 157th consecutive cash dividend

The board of directors of Nucor Corporation declared the regular quarterly cash dividend of \$0.365 per share on Nucor's common stock.

The cash dividend is payable on August 10, 2012 to stockholders of record on June 29, 2012, and is Nucor's 157th consecutive quarterly cash dividend.

One of the great mysteries in life is the fact that a woman could pour hot wax on her legs, rip her hair out by the roots and still be afraid of a spider.



### **METALS**

# May's finished steel imports near 2012 peak monthly level

Based on the Commerce Department's most recent Steel Import Monitoring and Analysis (SIMA) data, the American Iron and Steel Institute (AISI) reported that steel import permit applications for the month of May totaled 2,895,000 net tons (NT). This was a 10 percent decrease from the 3,230,000 permit tons recorded in April and a 3 percent decrease from the April preliminary imports total of 2,997,000 NT.

Import permit tonnage for finished steel in May was 2,298,000 NT, down 2 percent from the preliminary imports total of 2,336,000 NT in April. The 2.3 million permit tons of finished steel imports in May was the 2nd highest monthly total in 2012 and only slightly below the April 2012 peak amount.

May 2012 total and finished steel import permit tons would annualize at 34,787,000 NT and 26,731,000 NT, each up 22 percent, respectively, versus the 28,515,000 NT and 21,835,000 NT imported in 2011. The estimated finished steel import market share in May was 24 percent.

In May, the largest finished steel import permit applications for offshore countries were for South Korea (301,000 NT, up 12 percent from April), Japan (203,000 NT, up 42 percent), China (170,000 NT, up 20 percent), Turkey (124,000 NT, down 27 percent) and Germany (119,000 NT, up 40 percent). Through the first 5 months of 2012, the largest offshore suppliers were South Korea (1,496,000 NT, up 26 percent from the same period in 2011), Japan (831,000 NT, up 31 percent) and Turkey (806,000 NT, up 123 percent).

Finished steel import permits for products that registered large increases in May versus the April preliminary include standard pipe (up 38 percent), line pipe (up 38 percent), cold rolled sheets (up 27 percent), oil country goods (up 26 percent) and hot rolled bars (up 26 percent). Major products with significant year-to-date increases versus the same period in 2011 include reinforcing bars (up 54 percent), cut length plates (up 52 percent) and sheets and strip galvanized hot dipped (up 43 percent).

### AK Steel receives Chrysler award

AK Steel has received the Metallic "Supplier of the Year" award from Chrysler Group LLC. The award recognizes AK Steel for extraordinary performance in 2011, and positions AK Steel among an elite group of Chrysler's top suppliers.

According to Chrysler, AK Steel exhibited a prevailing sense of urgency to

AK Steel has received the Metallic meet goals, solve problems and support oplier of the Year" award from the company's growth objectives.

Chrysler's supplier of the year awards are based on supplier performance across several key metrics, including quality, delivery, cost and service. In addition, the awards reflect input from members of Chrysler's senior leadership team.

For additional METALS NEWS, see page B1.



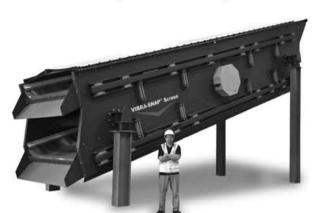
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Page A16, July 2012 American Recycler

# **AUTOMOTIVE**

# Higher MPG standard could equal higher profits

Automakers will likely make billions more dollars in profits under proposed new national gas mileage and emissions standards that will be finalized later this summer. A new report – produced by Citi Investment Research and Analysis in collaboration with Ceres – shows that American automakers will likely enjoy the biggest percentage increase in profits (6.3 percent), pulling in an extra \$2.44 billion dollars in 2020 under the standards. The industry as a whole will also likely see big profits, earning a 5.3 percent increase in profits of \$4.76 billion in 2020.

"Automakers who invest in more efficient vehicles are investing wisely. Given the volatility of gas prices – and the likelihood that they'll head through the roof again – it's clear that customers want better fuel economy and delivering it means a better bottom line for the industry," said Carol Lee Rawn, transportation director of Ceres, which leads a national coalition of investors and public interest groups work-

ing with companies to address global sustainability challenges.

The new report, "Fuel Economy Focus: Perspectives on 2020 Industry Implications," evaluates the impact that meeting the proposed fuel economy/GHG standards would have on the car industry in the year 2020.

The report finds that meeting the proposed standards will likely boost total vehicle sales for the automotive industry as a whole by about 4 percent or around 600,000 vehicles. As a group, Ford, Chrysler and GM would also likely see an improvement over baseline vehicle sales by about 4 percent, or 300,000 vehicles. Foreign automakers would likely record a 3 percent uptick in sales representing around 300,000 vehicles. Sales would increase because with increased fuel economy the overall cost of operating a car will go down and consequently, consumers will have more spending power to buy more vehicles or more expensive vehicles.

"Although the automotive industry as a whole will benefit by meeting the new standards, the Detroit Three will enjoy the highest relative profits boost," said Walter McManus, School of Business Administration at Oakland University, who conducted the sales and profits analysis. "The reason we see these increased benefits for American automakers is because compared to foreign automakers they are currently more heavily invested in lower mileage trucks and cars. Under these standards the Detroit Three would have a greater potential to add customer value to those vehicles with improved fuel economy."

According to the report, the new standards could largely be met by using existing technologies that improve the performance of cars powered by traditional internal combustion engines.

"Automakers today are already working on the improvements to the internal combustion engine and overall vehicle design to get us to 54.5 mpg. Turbocharged direct injection, advanced trans-

missions, electric power steering, low-rolling-resistance tires, turbo charging, variable valve lift and timing are available now and they continue to improve," said Alan Baum, founder of Baum and Associates, who conducted the sector analysis. "These technologies are not only cost-effective, but also make for better performing vehicles than those currently on the market."

The report finds that the added technologies required to meet the proposed fuel economy improvements are cost-effective for consumers. "Even if gasoline prices dropped to as low as \$1.50 per gallon in 2020, money saved during vehicle use would fully offset the cost of added fuel economy technology," said Dan Meszler of Meszler Engineering Services, who conducted the cost analysis. "Since gasoline prices are over twice that right now, it's likely that consumer savings on fuel purchases will far outweigh the additional money consumers will spend on a new car."

# Salvaging Millions

by Ron Sturgeon
Autosalvageconsultant.com

#### If you build a web presence, they will come

It would be nice if that were true. If you build a website that follows best practices for search engine optimization (SEO), keep measuring your results, keep adding good material to it and keep working at improving its performance in the search engines, visitors will probably come.

At first, you may get only a few hundred, but your numbers will keep climbing if you persist.

If you have the right message when they arrive, some of your visitors will become clients.

If that sounds like a lot of work, it is. An effective web presence takes work, but provides rewards, especially for people who thrive on competition.

#### Get found with good SEO

If you plan to get traffic to your site from search engines, you will need to work at optimizing your business website for search. You will need fresh, useful content for the site.

You wouldn't open a new salvage yard in a different part of town and add a driver and truck without marketing to that area and trolling for clients. Marketing your web presence is the same.

To make your website work, you will have to put up a good site and support it with a solid, ongoing SEO effort.

Delegate and manage your web presence

Most business owners are too busy to find the time to do all the SEO themselves. They just don't have time to write blog posts, build inbound links, update LinkedIn, Tweet or add to the company Facebook page.

Rather than skip it, I suggest you delegate it.

Start by creating objectives, a clear plan, budget, tasks and timelines and by making a person accountable for each element of the plan. Get your key people copies of *SEO for Dummies* so they can learn how search marketing works and how the tasks they are working on fit with the plan for generating revenue from the website.

### Give the SEO jobs to your most competitive employees

The internet is perhaps the most measurable marketing medium ever devised. You will be able to see where your site ranks for the keywords you care about. You will know how site visitors arrived using those keywords, what pages they looked at and how long they stayed on a given page. You will be able to measure how many of your visitors made inquiries or placed orders

It's fun to shoot past a competitor who isn't doing the work. Many of your competitors don't, so even small companies can win by being persistent and creative. Start building a winning web presence today.

#### 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.

### Ford sets new goal to cut waste

Ford plans to further reduce the amount of waste it sends to landfills by 10 percent per vehicle by the end of the year – building on existing efforts that have cut global waste by 100 million pounds (44 percent) in the last 5 years.

If successful, that means the company would generate about 20 lbs. of waste per vehicle on a global basis – roughly the weight of one tire.

Ford develops such targets as part of its annual environmental business planning process that also recently led to establishment of a global cross-functional team spanning several divisions to review waste generation more holistically.

Between 2007 and 2011, Ford globally cut the amount of waste it sends to landfills by 39 percent per vehicle – from 37 lbs. to just under 23 lbs.

See FORD CUTS WASTE, Page 17



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### **AUTOMOTIVE**

#### Ford cuts waste

**■**Continued from Page 16

One of the best examples of how Ford has reduced waste can be found at its plant in Flat Rock, Michigan, where the automaker uses an innovative process to eliminate waste. Ford began a pilot program in 2011 with a local energy supplier at AutoAlliance, where paint solids are sent to the energy supplier and used as a raw material in its process to generate electricity.

"When we paint a vehicle, not all the paint ends up on the vehicle," said Lisa Hansen, manager, technical services, EQO. "We use a water wash scrubber system to capture and collect the excess paint solids so they are not released into the environment."

The reprocessed paint solids are then dewatered to increase their energy value and sent to a local power plant. This is an innovative way to keep material out of the landfill and use it as a raw material in another process. The project is being replicated at several other Ford assembly plants.

The compactor is powered by solar panels and compresses the waste much more efficiently than the previous compactor. The compacted trash is then sent to a waste-to-energy facility where it is converted into power. This compaction reduces the number of shipments and thus the fuel consumed for its transportation. Coupled with previous efforts to recycle all of the site's cardboard, paper, wood and plastic, this eliminates the need to dispose of any waste in a landfill.

### WASTE

# WM's Zero Waste Challenge exceeds goals

Waste Management's (WM) official tally of the final diversion and recovery as part of the Zero Waste Challenge from this year's Waste Management Phoenix Open (WMPO) PGA TOUR tournament were better than expected.

More than 97 percent of waste generated by the tournament was diverted from landfills, exceeding the 90 percent tournament goal. Eighty-two percent of tournament materials were recovered from the waste stream through recycling, composting, material reuse and charitable donations – far exceeding the goal of 70 percent.

While the tournament ran, months of set-up took place prior to the event, followed by weeks of post-event material removal. All materials diverted were carefully handled and tracked to ensure nearly nothing went to waste.

The Zero Waste Challenge initiative mandated that all vendors utilize compostable or recyclable serving materials or containers, and educated patrons about the proper disposal of materials in either recycling or compost bins for all waste produced at the event. For the first time in PGA Tour history, no trash cans

were present on course. Volunteer recycling ambassadors were stationed throughout the course to ensure materials went in the appropriate bins, and a dedicated operations team behind the scenes sorted materials.

Waste Management's Sustainability Services team, which has expertise in sustainable event management, led the greening of the WMPO. The team of experienced sustainability professionals worked closely with tournament organizers to develop creative solutions to the unique waste management challenges presented by the event, which attracted 518,262 people. The program's success reinforces that the Waste Management Phoenix Open is the "greatest and greenest" show on grass.

Materials were recovered at the 2012 Waste Management Phoenix Open in many ways, but the highlights include:

#### Recycling

•Plastics, including LDPE, HDPE, PET, aluminum, paper, cardboard, glass and metal were sent to WM's Arizona Community Ecocenter Material Recovery Facility (MRF) for processing.

#### Composting

•Food, napkins, plates and cups used during the tournament were processed in a digester to produce high-quality compost for surrounding communities.

#### **Charitable Donation**

•WM donated carpet to a local Habitat for Humanity ReStore to sell the carpet to the public. Proceeds of carpet sales help Habitat achieve its mission of building homes, communities and hope.

#### **Transforming Event Materials**

•All of the scrap wood was processed by a local organic lawn and garden company, Gro-Well, who ground the wood into mulch.

•Turf and green mesh were sent to a company that recovers the energy and mineral components from waste for use as fuel and product additives used in manufacturing processes. This conserves fossil fuels and natural mineral resources and diverts the materials from landfills.

While not included in the tournament recovery goals, the approximately 140,000 used golf balls filling the WM water feature on the lake at hole 18 were donated to The First Tee, a youth charity teaching life skills through the game of golf.

# Republic Services reports first quarter results

Republic Services, Inc. reported net income of \$142.9 million, or \$0.38 per diluted share, for the 3 months ended March 31, 2012. Net income for the 3 months ended March 31, 2012 and 2011 includes a number of charges and other expenses that impacted its results.

March 31, 2012 increased to \$1,982.4 million compared to \$1,964.9 million for the same period in 2011. This increase in revenue of 0.9 percent was made up of increases in core price of 0.6 percent, fuel recovery fees of 0.5 percent, volumes of

Revenue for the 3 months ended 0.2 percent and acquisitions, net of divestitures of 0.4 percent, partially offset by a decrease in recycling commodities pricing of 0.8 percent.

Republic's board declared a regular quarterly dividend of \$0.22 per share for stockholders of record on July 2, 2012.



# Is recurring fork failure becoming an issue?

Cracks and wear are the first signs of fork failure but lack of preventative maintenance and daily inspection normally leads to catastrophic failure at the most inopportune times.

This increases downtime and causes added operating expenses. Work takes longer and is more difficult to do with bent or worn forks.

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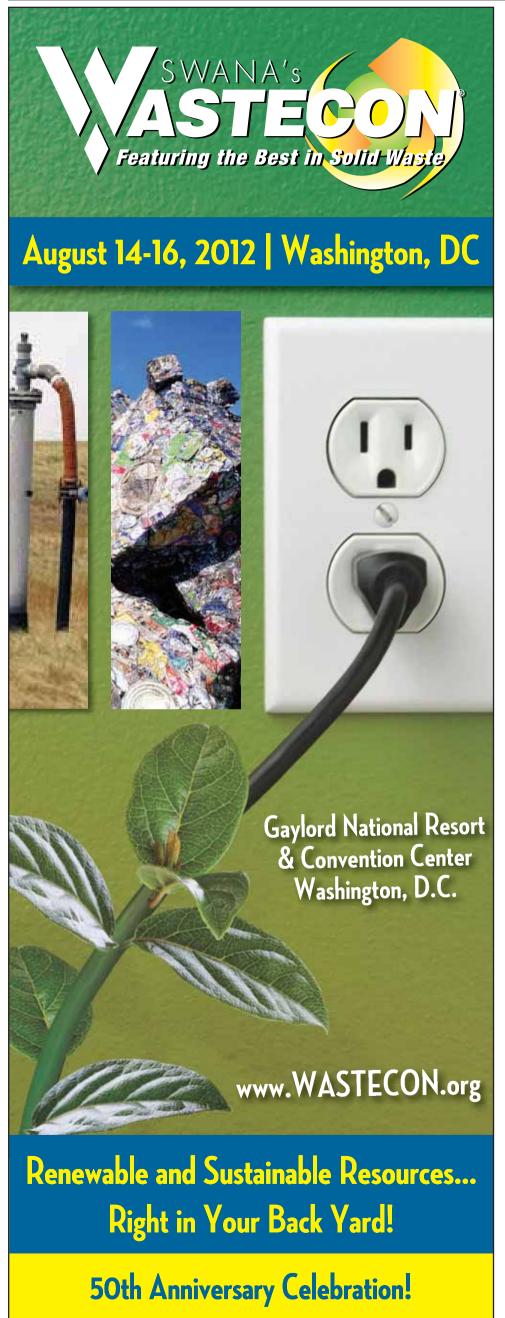
Eastern USA 877-727-3675 Paul@sasforks.com

Western USA 877-727-3675 Adam@sasforks.com

www.sasforks.com



Page A18, July 2012 American Recycler



## **BUSINESS BRIEFS**

# Wastequip partners with BiobiN North America

■ Wastequip has partnered with BiobiN North America to provide a solution for food waste recycling as part of its recently launched Organics2Go program.

Wastequip developed Organics2Go to provide a cost-effective, environmentally responsible method of commercial food waste collection and recycling. BiobiN is a key component of the solution.

Designed for commercial organics recycling, BiobiN offers a sustainable method of organic waste collection by allowing waste decomposition and volume reduction. This increases the time between hauls which reduces collection frequency and lowers the associated transportation costs. BiobiN helps meet sustainability initiatives by increasing recycling rates and lowering carbon emissions. BiobiN also captures odors, reduces volume and eliminates the attraction of rodents and insects. It is ideal for supermarkets, food processors, universities, hotels and other commercial food waste generators.

BiobiN uses a patented biofiltration system to keep organic waste aerobic by circulating filtered air throughout the container via a series of pipes. The air is pulled through its biofiltration system and back into the container. This prevents the growth of pathogens, discourages odor and reduces vector attraction while allowing waste decomposition to occur between hauler collections. Since BiobiN reduces waste volume and collection frequency, it lowers hauling costs and improves recycling rates.

# Paragon hires MacCallum as new vice president

■ Paragon Environmental Construction, Inc. announced that Virginia MacCallum has joined the company as its new vice president of business development and marketing.

MacCallum has 20 years' experience in business development and marketing and 12 years' expertise in the fields of architecture, engineering and construction.

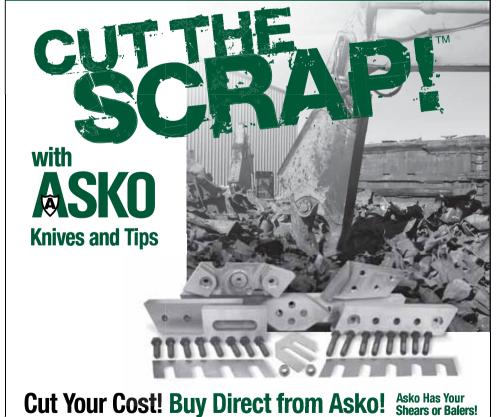
MacCallum most recently was the national business development director for Tug Hill Construction in Watertown, New York. She has worked for both government and private companies over the last 25 years, beginning her career in 1987 as the program director for the Black River Housing Council in Watertown.

MacCallum's notable achievements include leading a woman-owned architectural and engineering firm and managing the U.S. Army's business development activities on the east coast for an international engineering firm. She has secured multi-million dollar contracts for various companies throughout her distinguished career.

# New Peterson distributor named in Florida

■ Peterson Pacific Corp has appointed Peninsula Equipment as the new Peterson distributor for the Florida peninsula and the central pan-handle region.

Peterson specializes in developing delivery and processing equipment that turns low-grade organic materials into high value products.





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# **BUSINESS BRIEFS**

# Bulk Handling Systems completes NRT acquisition

■ Eugene, Oregon based Bulk Handling Systems (BHS) has acquired National Recovery Technologies (NRT), a Nashville, Tennessee based company that designs and manufactures optical sorting equipment for the solid waste and recycling industries, among others.

NRT was founded in 1981 and owns or is the exclusive licensee of 29 U.S. patents and 5 foreign patents covering NIR, X-Ray, Laser and Line Camera sorting systems. NRT is an industry leader in plastic bottle and flake sorting technology, claiming the world's largest installed capacity in PET plastic reclamation plants. BHS has catapulted to the forefront of the recycling industry, and is currently building the largest and most sophisticated material recovery facilities in the world. This acquisition gives the company an additional resource to utilize as it continues to seek cutting edge solutions for a wide range of processing needs.

# Liebherr promotes Doucette to general manager

■ Timothy Doucette has been promoted to the newly created position of general manager — brand strategy for Liebherr Construction Equipment Co. In this new role, he will work closely with the Duane Wilder, president, to ensure all aspects involving the brand are coordinated to increase Liebherr's market presence in the United States as a manufacturer of premium heavy-duty construction equipment.

# Kolberg-Pioneer adds structural design engineer

■ Kolberg-Pioneer, Inc. welcomed Chris Baer, PE, to its engineering team as a structural design engineer.

As a structural design engineer, Baer will perform structural steel design for both the washing and material handling product lines. Previously, he worked as a design engineer for Dakota Steel and Supply in Rapid City, South Dakota, and as a design engineer at Gage Brothers Concrete Products in Sioux Falls, South Dakota. Baer received both his Bachelor of Science degree in Civil Engineering as well as his Master of Science degree in Structural Engineering from the South Dakota School of Mines & Technology in Rapid City, South Dakota.

# New single stream recycling facility in Akron

■ Greenstar Recycling opened their newest single stream recycling facility in Akron that will serve customers in central and northeast Ohio.

Greenstar has invested \$7 million in the Exeter Road recycling facility, which includes improvements to an existing 196,000 sq.ft. facility and new technology upgrades to help automate the sorting of materials. The facility will process 7,000 tons of recyclables per month, but can expand that capacity to 15,000 tons as the need arises. Greenstar has created 43 new local green jobs in order to run the facility and jobs could potentially increase to 75 as recycling volume increases.

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LP Wire-Tie 635 E Central Avenue Carthage, MO 64836 800-621-6141 www.lpwiretie.com

# L&P WIRE-TIE DEBUTS PINNACLE II BUNDLING SYSTEM

The Pinnacle II™ recycling and waste bundling system from L&P Wire-Tie offers increased production time, easier serviceability and reduced wire costs. The tying head, fully serviceable from the front, can be completely disassembled in as little as 15 minutes, reducing time needed to make repairs and adjustments. The interconnection, located outside the machine, allows cables to be replaced accurately and quickly by the operator. The heart of the Pinnacle II is the CORE, containing 80 percent of the tier's wear parts and easily swapped out to change wire gauges.



Philippi-Hagenbuch, Inc. 7424 W Plank Road Peoria, IL 61604 800-447-6464 www.philsystems.com

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# RMT'S NEW DIGITAL RECORDING FOR SAFETY CAMERAS

RMT Equipment Ltd. released a new digital recorder to complement its Track-Vision backup safety cameras.

The Track-Vision Easysolid recorder allows operators to identify unsafe conditions and practices that may result in equipment, property damage or injury. The recorder is a compact digital system that will continuously record video signals from any Track-Vision camera for up to 72 hours. Video segments are saved to a standard 32 GB memory card.

The unit measures just  $5.\dot{2}5$ " x 2" x 6.7" and installs easily with the provided mounting hardware.



RMT Equipment Inc.

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800-648-8132 www.rmteguip.com

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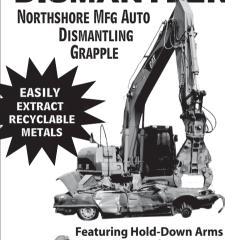
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Continued on Page 22

Page A22, July 2012 **American Recycler** 

#### **Miscellaneous**

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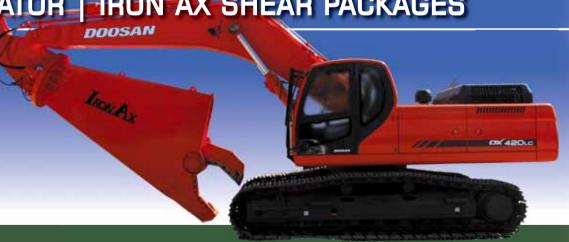
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# METAL RECYCLING

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# Recycling rare earth metals from batteries

by MARK HENRICKS

mhenricks@americanrecycler.com

Toyota has sold nearly 3 million Prius hybrid-drive automobiles, each of which contains a battery pack that has more than 20 lbs. of an exotic metal called lanthanum. Lanthanum, like most of the 17 so-called rare earth elements, primarily comes from China, which has recently tightened export quotas. Special properties of rare earth metals make them highly useful for batteries, magnets and electric motors, and China wants to reserve them for its domestic industries.

Tension between rising demand for lanthanum, which has been infrequently used in products before now, and uncertain supply has created growing interest in finding ways to recycle the millions of batteries that will be coming out of hybrid and plug-in electric cars using nickel-metal hydride batteries. There are plenty of precedents.

Conventional lead-acid 12-volt automobile batteries are among the globe's most recycled products. The Environmental Protection Agency (EPA) said that more than 90 percent of the 100 million lead-acid batteries replaced each vear in the United States are recycled.

Lead-acid batteries are highly recyclable. Nearly all the lead can be recycled into new batteries or other products. The sulfuric acid electrolyte can be converted for use in fertilizer and elsewhere. The cases, made of plastic, can also be recycled. In addition to well established

technology and processes for turning used batteries into new products, there is a nearly universal collection system consisting of retailers who sell new batteries.

Recycling of lithium used in batteries is not as widespread but is still fairly well developed. Lithium, which is not a rare earth metal and is primarily sourced from Chile rather than China, is also used in many rechargeable batteries including some electric vehicles. The low cost of virgin mined lithium makes recycling lithium-ion batteries less economically attractive than conventional lead-acid batteries. Still, San Diegobased Kinsbursky Brothers has, with the help of a \$9.5 million Department of Energy grant to its Toxco subsidiary, been building a plant in Lancaster, Ohio that will be able to process large volumes of lithium-ion car batteries when it opens later this year.

The situation is very different with nickel metal hydride car batteries containing lanthanum. While a number of initiatives are underway to set up systems for collecting and processing these batteries to recover the lanthanum, few are past the experimental stage and none are in full production.

Honda recently began working with Japan Metals & Chemicals Co. to extract the lanthanum from nickel-metal hydride vehicle batteries used in its hybrid-drive vehicles. The automaker will collect the batteries and ship them to a central facility for processing. Like other nickel-metal hydride battery recy-



It is not uncommon for hybrid vehicle batteries to contain over 20 lbs. of lanthanum, imported from China.

clers, Honda had been recycling the nickel for production of stainless steel, but not the lanthanum. The new process

extracts 80 percent or more of the rare earth metals contained in used nickel-See RARE EARTH, Page 7

#### Aluminum industry engaged in Ohio landfill legislation

Senate Bill 294, the aluminum industry is working with Ohio Environmental Protection Agency (OEPA) and key legislative offices to promote environmental protection, good governance and business.

In a recent statement before the Ohio House Agriculture and Natural Resources Committee, state Senator Tim Schaffer (R-31) remarked that the

As testimony continues on Ohio legislation's goal was "to provide reforms that ensure a business friendly climate while continuing to protect the environment."

> State Senator Schaffer and his office have been actively engaged in conversation with the OEPA and various industries, including the aluminum industry on areas in the legislation that could limit business opportunities. The coalition is working with

members of the governor's administration, OEPA director, Scott Nally and members of the House Agriculture Committee to find a constructive solution supporting business growth and environmental protection.

"Constructive cooperation between businesses, legislators and regulatory agencies achieves the best goals for business, the environment and people," said Heidi Brock, president of the Aluminum Association. "It allows for state-specific issues to be addressed in a manner that meets local needs."

The industry is concerned that the current language of the bill could negatively impact current OPEAapproved disposal practices fully supported by the aluminum industry, prevent business innovation in this area

See ALUMINUM, Page 6



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# A Letter from the Editor

Readers,

Welcome to the July issue of American Recycler. We run a fair number of stories about hybrid and alternative-fuel vehicles. One of the many claims that manufacturers of such vehicles make is that they help reduce our nation's dependence on foreign fuel supplies.

And on paper, at least, it looks good. However, even in a best-case scenario, where every household and commercial fleet in the nation utilized vehicles with hybrid or alternative fuel sources, would we truly be able to independently meet all of our transportation energy needs?

While we would surely be a great deal closer to the lofty goal of energy independence, it's unlikely that we will be able to withdraw from international energy markets in the foreseeable future. In our cover article this month, author Mark Henricks describes how China may become the new OPEC as it tightens export quotas on rare earth minerals, such as lanthanum, which are used more and more frequently in the manufacture of electronics and hybriddrive battery packs. As our use of battery-powered vehicles rises, we seem to be extricating ourselves from one unhealthy relationship, and walking gratefully into another.

As always, however, where there's scarcity, someone will figure out a way to meet demand. With Toyota alone having sold over three million Prius vehicles since its worldwide introduction in 2000, a substantial amount of lanthanum has already escaped China's borders and is free for reclamation. Henricks goes on to explore what is being done to recycle and reclaim the precious rare earth from spent hybrid vehicles for reuse in new vehicles and other applications. When hybrid battery packs are reclaimed at the same rate as traditional lead-acid batteries, Chinese export policy will be of much less concern to consumers of lanthanum and other rare earth metals.

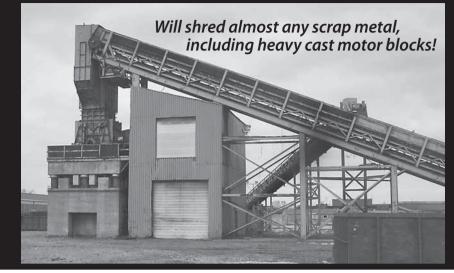
I hope you all had a wonderful Independence Day. Until next month,

Dave Fournier



Dave Fournier Focus Section Editor david@americanrecycler.com

# Williams Model 760 Metal Shredder



3,000 hp Toshiba motor. Rotor has a 70" hammer swing x 70" widewith a Brute 17" shaft.

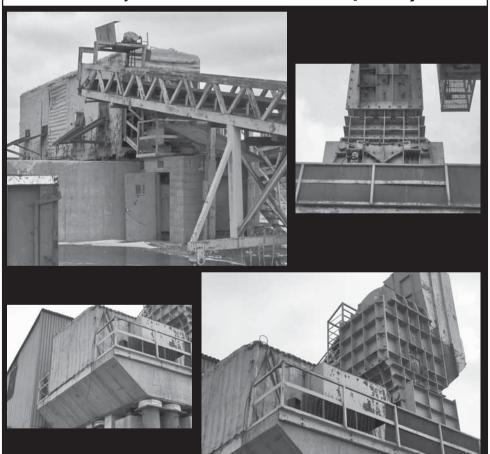
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### Aluminum Association names new VP

Heidi Brock, president of the Aluminum Association, announced that, effective July 9th, John Weritz has been named vice president of standards and technology.

In this role Weritz will be responsible for the development and maintenance of industry standards for alloys, aluminum alloy/temper products and structural applications. He will also serve as chief industry resource responding to technical and general queries from customers, government agencies, the media and the public concerning aluminum products, processes, and standards.

Weritz comes to the Aluminum Association from Wise Alloys, where he has served as metallurgy manager since 2007. In that role, he was responsible for developing and improving manufacturing methods for Wise's commercial aluminum products.

Weritz brings over 30 years of experience in the production of aluminum sheet, plate, foil and extrusion products. He began his career at Reynolds Metals Company, earning roles of increasing responsibility in 25 years with the company, including metallurgical supervisor, quality control manager, can stock technical manager, director of quality assurance and metallurgy, and production manager.

Subsequently, he moved to McCook Metals LLC, where he was senior vice president responsible for plants acquired by Michigan Avenue Partners, as well as due diligence and technical evaluations of potential new acquisitions.

Weritz holds a B.S. in Metallurgical Engineering from the University of Illinois at Chicago.

# A SPOTLIGHT

To be included in the spotlight, you must manufacture the equipment featured. We require a company name, contact person, telephone number and, if applicable, a website address.

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11/12	Rubber Shredders	

American Recycler is not responsible for non-inclusion of manufacturers and their equipment. Manufacturers are to contact American Recycler to ensure their company is listed in the Equipment Spotlight.

# Kloeckner to build light gauge flat rolled processing facility

Kloeckner Metals, a metal distributor in North America, will build a light gauge flat rolled processing center on a greenfield site in the Southeast. The facility will be located on-campus with ThyssenKrupp's state-of-the-art carbon flat rolled mill in Calvert, Alabama.

The 100,000 sq.ft. service center will initially offer slitting and will eventually expand its processes to include cut-to-length, blanking and multi-blanking. Along with construction, Kloeckner will focus on developing a first-rate workforce to operate the facility, which will require approximately 40 people.

"The focus of this facility will be three-fold: growth of our traditional value-added flat-rolled business, entry into the value-added automotive processing business and toll-processing for the mill," said Russ Delaney, president of the Flat Rolled Group for Kloeckner Metals.

The newly constructed processing center can be expanded to over 400,000 sq.ft., if required. It will be the second Kloeckner Metals location in Alabama. The company currently operates a 78,000 sq.ft. general line service center in Bessemer, Alabama, part of the company's Heavy Carbon Group.

# AK Steel provides second quarter 2012 financial results

AK Steel provided guidance for its second quarter of 2012 financial results.

AK Steel said it expects total shipments of approximately 1,350,000 tons in the 2012 second quarter, which is slightly higher than the first quarter of 2012. The company said it expects that its average per ton selling price for the second quarter of 2012 will be about the same as in the first quarter of 2012. AK Steel also said that it expects to benefit from higher operating rates and lower raw material costs in the second quarter of 2012 compared to the first quarter of 2012.

Taking all of these factors into account, and subject to the possibility discussed below of recording a valua-

tion allowance for its deferred tax assets, AK Steel said it expects to generate net income of between \$0.04 and \$0.06 per diluted share of common stock for the second quarter of 2012, which would represent an improvement compared to the loss of \$0.11 per diluted share reported for the first quarter of 2012. Due to increased uncertainty and volatility with respect to near-term economic conditions in the United States and in other markets served by the company, including a recent deterioration in spot market pricing, AK Steel cannot provide reliable guidance at this time for the company's results for the remainder of 2012.

# Steel Dynamics provides 2nd quarter 2012 earnings

Steel Dynamics, Inc. provided second quarter earnings guidance in the range of \$0.15 to \$0.20 per diluted share. Second quarter 2012 estimated results are somewhat lower than the \$0.20 per diluted share reported for the first quarter 2012 (which included January refinancing charges of \$0.03 per diluted share), and lower than the \$0.43 per diluted share reported for the second quarter of 2011.

Despite relatively stable sheet steel demand, including strength in the automotive, energy, construction equipment and agricultural sectors, the company's somewhat softer earnings estimate is primarily the result of decreased sheet steel pricing attributable to supply-side pressures from

Steel Dynamics, Inc. provided increased imports and increased and quarter earnings guidance in domestic steel capacity.

Metals recycling earnings are also expected to be lower due to late second quarter pricing and volume pressures attributable to softer export markets and weaker mill buying patterns, resulting in an oversupplied environment. Due to inventory overhang, however, the benefits from decreased scrap pricing on the company's steel operations will not be fully reflected until the third quarter.

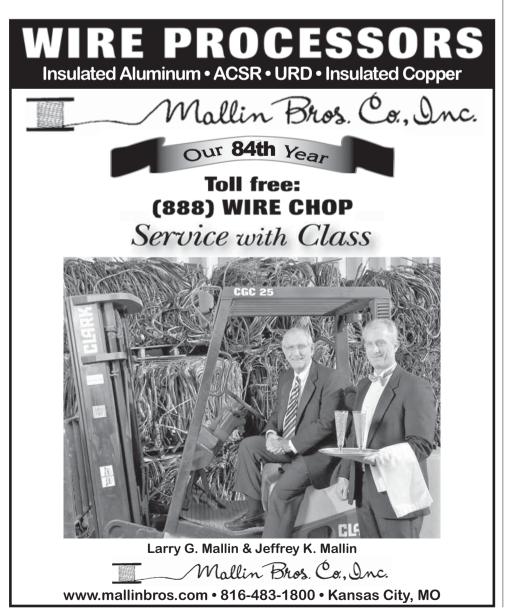
#### **Dividends**

The company's board of directors has declared a quarterly cash dividend of \$0.10 per common share. The dividend is payable to shareholders of record at the close of business on June 30, 2012, and is payable on or about July 13, 2012.

# Lihua starts production on new copper anode smelters

Lihua International, Inc., a Chinese developer, designer and manufacturer of pure copper product alternatives such as refined copper products, superfine and magnet wire, as well as copper clad aluminum wire, has disclosed that the company completed pre-heating and began producing copper anode on its two newly-constructed smelters. With these smelters on-line, Lihua has increased copper anode production capacity from 35,000 tons to 85,000 tons per year. Total refined copper production capacity has increased from 85,000 tons to 135,000 tons annually.

Additionally, the company has reiterated its full-year 2012 guidance, which calls for gross profit to be between \$93 to \$96 million, and non-GAAP net income between \$61 to \$64 million, representing year-over-year growth of 23 to 27 percent and 22 to 28 percent respectively. The company expects that 2012 growth will be largely the result of the additional refined copper production capacity and continued strong demand in China for recycled copper and copper alternative products in end markets that include household appliances, consumer white goods and infrastructure.





# EQUIPMENT SPOTLIGHT

# Metal Shredders

by MARY M. COX

maryc@americanrecycler.com

According to a recent report by the Organization for Economic Cooperation and Development (OECD), there are approximately 300 shredders in America producing scrap metal. By contrast, China has only 30 shredders, according to the OECD report. Regardless of location, when those machines must be repaired or replaced, there are many vendors available to address that need.



Granutech-Saturn Systems

The shredders made at Granutech-Saturn Systems "are suited for nonferrous or light ferrous metals. Our customers are looking for a lower processing volume than what is typically seen in the larger hammermill shredders. Typical volume through our equipment usually ranges in the 2 to 20 tons per hour range," noted Greg Wright, director of sales.

The company offers the following products: The Roto-Grind – a single-rotor grinder used in nonferrous applications, typically aluminum. This is a ram-fed machine in which the ram feeds material to the rotor and uses a sizing screen to provide a consistently-sized product. The Roto-Grind rotor rpm is between 80 and 168, depending on the application.

The Saturn Shredder is a dual-shaft, slow speed, high-torque shredder. This shredder is used for nonferrous or light ferrous metals. It can handle tougher material than the Roto-Grind and unlike the Roto-Grind, it is capable of dealing with heavy ferrous contamination. Typical shaft speed is between 11 to 30 rpm.

Granutech's Grizzly product is used as a secondary shredder to achieve maximum size reduction. It utilizes a 19,000 lb. rotor spinning at 321 rpm with rotary knives, which cut against stationary bed knives. A screen is also used to achieve product sizing.

Applications include aluminum, e-scrap and tires.

"For over 40 years, we've offered size reduction equipment to the recycling industries. Our products include the MAC line of car crushers, Saturn Shredders and Granutech tire processing equipment. When purchasing some of this equipment, buyers must become acquainted with EPA, state, and local regulations concerning restrictions for air quality or other factors. Customers in this market may also sometimes face

hurdles in obtaining the appropriate permits to operate," Wright said.

SSI Shredding Systems has provided metal shredders worldwide for over 30 years. The SSI shredder line starts at 200 h.p. and ranges up to 800 h.p. Shredders in the 400 h.p. range are not uncommon for high volume applications.

Dave Wilson, technical sales, described the machines available from SSI: "We manufacture four types of shredders, all relatively slow speed/high torque, compared to high-speed hammer mills or auto-shredders. SSI shredders are used for processing metal, both ferrous and nonferrous. The most popu-

lar products are larger shredders for the most demanding applications at the highest volumes.

"Our Pri-Max and Dual Shear models are versatile and utilized at the front end of metal recycling operations. For ferrous materials like appliances, the Pri-Max PR4400 and PR6600 are capable of high-volume processing. They are not car shredders and are not recommended for processing

heavy ferrous. The slow speed shredder is the ideal first step in a reclamation line because the system can be batch fed, handles a wide range of scrap, and reduces the material down to a small size. In some cases primary shredding is the only size reduction required but it can also be an ideal first step in preparing the material for further processing, via secondary shredding equipment.

"Reliability is the leading advantage of a slow speed. Minimal noise, dust, vibration, foundation, maintenance, downtime and relatively low operating cost are other advantages of slow speed, high-torque technology. Industry regulations continue to evolve, regarding dust control because the issue has become more of an issue in recent years."

Wilson stated that nonferrous applications are also popular uses for the SSI slow-speed, high-torque shredder machines. Baled or loose scrap aluminum, copper, radiators, wheels, wire and extrusion are some nonferrous applications well-suited to SSI products.

Special shredding technology is required to handle the scrap that contains ferrous and contaminants. These applications require systems that are designed with shock protection features such as automatic reversing, which protects the shredder from damage when processing foreign materials. "Thanks to low rpm cutting and shock protection, the chance of damage to the equipment is minimal when processing scrap. The cutter should also be designed to be abrasive-resistant, as lower grade scrap often has sand, glass, dirt and other unfavorable contaminates that accelerate cutter wear.

"If smaller particle size is required, it is common to use two shredders to process the materials. A pre-shredder



SSI Shredding Systems, Inc.

like our Pri-Max breaks open the bales and a second shredder processes the shredded scrap further. It is possible to achieve high rates and a small particle size with two, slow-speed shredders and no sizing grate or recirculation. Often the second shredder can be a dual shear with a narrow cutter, which is 2 inches wide and produces a smaller, more consistent particle size. This double-stage concept with ferrous removal is a good option for achieving the cleanest non-ferrous scrap," Wilson said.

When a screen is eliminated from a system, Wilson explained that "the capac-

ity increases and maintenance often decreases. However, some applications such as auto shredder residue require a particle size smaller than a single or two stage shredder can provide. Screen-based shredders such as the SSI Quad are ideal for reducing material to a very small, con-

See SPOTLIGHT, Page 5

#### **Manufacturer List**

American Pulverizer Co. Chris Griesedieck 314-781-6100 www.ampulverizer.com

Granutech-Saturn Systems Greg Wright 877-582-7800

www.granutech.com

Komar Industries, Inc. Mandy Howenstine 614-836-2366 www.komarindustries.com

Magnatech Engineering, Inc. Michael Graveman 913-845-3553 www.magnatech-

www.magnatechengineering.com

Metso Minerals Industries Inc. Chad Grohman 210-491-9521

www.metso.com

Riverside Engineering, Inc. Rusty Manning 210-227-9090 www.riversideengineering.com

Shred-Tech Joe Roberto 800-465-3214

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# Spotlight

■Continued from Page 4

sistent size, such as 1.5 inch minus. The Quad is a heavy-duty, slow-speed shredder but it also incorporates the integrated screen feature. It is a compact system that produces a small particle size in a one-step operation."



**UNTHA Shredding** 

Bernhard Mueggler, president and CEO of UNTHA America, described the shredder market as "mostly determined by commodity pricing - while legislation continues to push for additional recycling levels. The industry will likely consolidate over the next few years as smaller operations are acquired by regional and/or national companies."

UNTHA manufactures over 400 shredders per year, for various applications. "We have developed and produced innovative shredding solutions for individual tasks for over 30 years. In doing so, our customers and markets determine the direction of UNTHA," Mueggler said. He then highlighted the features of two of their products and both are used if high plant availability. low maintenance cost and small footprint is

UNTHA's S-120 heavy duty twoshaft shredder offers size reduction with-

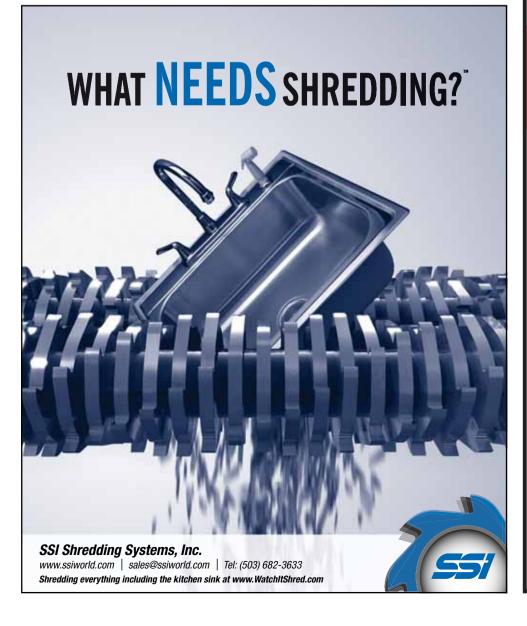
out a defined particle size. It is a hightorque, low RPM machine with low emissions and vibration. The intelligent cutting system and drive allows the cutting power to be increased by 70 percent for a short period of time. The S-120 offers a cutting system protection, shaft ventilation, wear protection, electronic overload protection, wear plates and is available

> with electro-mechanical or an electro-hydraulic drive. optional variable frequency drive (VFD) offers increased throughput control, to reduce start-up peaks. Throughput can handle up to five tons per hour. The machine is used for nonferrous and ferrous shredding and electronic scrap and has a low, overall cost.

> The UNTHA heavy duty 4shaft shredder series (RS50 / RS60 / RS100 / RS150) offers size reduction with specific parti-

cle size requirements. Features include a very large screen area, pre-shredding and secondary shredding in one step, and modular systems to accommodate individual customer requirements. It is a high-torque/low-RPM machine with integrated electronic shut-down to protect the cutting system, multiple shaft bearings and a multi-stage sealing system.

The reinforced steel frame is rugged and has a cutting tool (with highly flexible cutting system configurations) with an integrated flange that eliminates spacers. The machine generates consistent particle size for effective downstream processing and the gravity feed eliminates ram for most materials. Throughput can handle up to 10 tons per hour and like the S-120, the machine has an optional VFD, shreds electronic, nonferrous and ferrous material and has a low overall





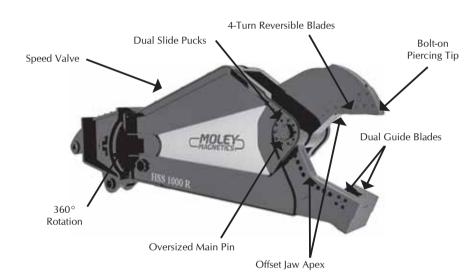
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## **A Closer Look**

by Donna Currie

#### **Metalico Annaco**

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While Bob Toth is officially in charge of human resources and safety at Metalico Annaco, he pointed out that at a small company you wear a lot of hats. He started working for the company in 1988, but explained that the company has existed for much longer.

In the 1920s, the company was collecting glass, newspaper and scrap metal door-to-door. Like many recyclers that started that way, the business eventually specialized. The decision back then was to stay in the metals business.

Later, the company specialized even further, focusing on engine blocks. "Aluminum was a necessary evil coming off the line," Toth said. "Now, aluminum can be a friend of ours, too."

Even though the company now operates a full service scrap yard, engine blocks are still an important part of what they do. They use a proprietary process for crushing engine blocks that results in a very clean, washed cast product that Toth said was a premium product for foundries. "That's our niche," he said.

Like every other scrap business, Metalico Annaco had to weather the recent economic downturn. "The scrap industry usually works pretty close to the vest," Toth said, so there wasn't much fat to trim, so they worked at becoming more

"The commodities market is a risky business," Toth said. "You don't predict the market, but you anticipate the market. The old timers are real good at knowing how to buy and the pulse of the market. You have to be pretty savvy not to get burnt." He said that unlike some industries, the scrap business isn't something you can learn in school. "You have to live it and do it and be knocked around a few times."

For Toth, it's not all about buying and selling. When he first joined the company, there was no human resources (HR) department, but the owners realized the value in having someone monitoring issues like safety, health, accidents and injuries. "These kinds of things were costly," Toth said.

Since then, Toth has built a modern HR department and has made it a goal to "hire good people from the start." He said that he's not looking for perfect employees, but that an "honest, reliable background" is important.

When he's recruiting, he said that he sometimes has to convince new employees that the scrap business is not a dirty, dusty, nasty job – that it's a

However, he also said that there's "a higher learning curve and a longer learning curve" than you'll find in some industries, but that it's worth it. "It's that constant battle that keeps you on edge. You hunker down and do the best

Hiring is just one part of the picture, though. Safety is a huge issue in the industry. He said it wasn't his forte when he first came to the company, but that now he's "a semi-expert in scrap yard safety."

From a business perspective, if employees aren't getting injured, the company saves the expense. "Safety is a monster that will cut your bottom line in a heartbeat," he said. But even worse is the heartbreak of having to call an employee's family to tell them about an accident. After all his years with the company and with only about 40 people working there, he has a lot of friends at work.

He was very pleased that the company has gone seven years without a losttime accident, and he credits all the training and classes and safety programs that have been put in place. "There are lots of things in a scrap yard that can injure you," he said. So employees are encouraged to always "take an extra second to do some common sense thinking" to keep themselves and those around them

He sees his job as keeping the workforce running smoothly so the financial folks don't have to worry about employee-related expenses, but also said, "They're the life and breath of the company. They're the thinkers and the doers."

Toth is excited about "what's happening outside." He sees loads of scrap coming in that might be airplane parts, or a dismantled bridge, or just a load of random scrap, and he sees it turn into something that's worth selling to mills and foundries. "It's an exciting business, really."

Since it began in the 1920s, the company was family owned, but about five years ago it was purchased by a large corporation. Going forward, Toth anticipates further corporate expansion. "They have a theme of growth," he said. "Productive growth." How much growth depends in part on the economy, but "if you're not growing, then you're going in the other direction," he said.

While Toth was happy to work for a family-owned company, he's also happy with the new corporate owners. "They seem to care about the employees," he said. "I think they're on the right path."

# **Vulcraft And Nucor receive** environmental awards

two Nucor facilities have been awarded environmental awards related to their commitment to environmental excellence.

Vulcraft-Texas and Century Industrial Coatings have been honored with the 2012 Texas Environmental Excellence Award for reducing VOC emissions. The 2012 Texas Environmental Excellence Awards are given to a select group of outstanding public and private organizations in nine diverse categories. Vulcraft-Texas has been recognized for their work replacing solvent-based primers with water-based primers. This particular project has resulted in an 85 percent reduction in emissions from not

Nucor Corporation disclosed that only the Texas facility but all Vulcraft operations nationwide.

The Texas Environmental Excellence Awards are given annually by the Texas Commission on Environmental Quality (TCEQ) and was accepted by James Landrum, general manager of Vulcraft-Texas and vice president of Nucor, along with Century Industrial Coatings.

Additionally, Nucor Steel-Berkeley has been awarded the South Carolina Manufacturers Association's "Made in SC Excellence in Corporate Responsibility Award." This award was given to companies that exemplify excellence in environment, safety and community leadership.

### Aluminum

**■**Continued from Page 1

and limit advances in recycling. State Senator Schaffer said in his statement that "we are still working with the aluminum industry to tweak the language in a way that prevents co-disposal without inhibiting innovation."

The aluminum industry has offered advice that would protect business innovation by clarifying solid waste management for aluminum byproducts. "The aluminum industry will remain engaged in a strong working relationship with key stakeholders in Ohio to achieve a solution that advances recycling while fostering business growth and innovation," said Brock.

"Comments on legislative language offered by the industry allow for a positive business environment while supporting good governance and environmental protection, the goals of Senator Schaffer's legislation," said Brock.

The aluminum industry is a vital part of Ohio's economy. In 2009, the industry employed over 30,000 workers; nearly 8,000 direct jobs and over 22,000 jobs in dependent upstream and downstream industries. The total economic value of the Ohio aluminum industry was \$6.4 billion, \$2 billion from direct output.

The theory used to be you marry an older man because they are more mature. The new theory is that men don't mature. So you might as well marry a younger one.



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# Chicago school winner of PepsiCo green school makeover

School in Chicago, Illinois is the official grand prize winner of this year's Dream Machine Recycle Rally "Dream Green School Makeover" contest and will be awarded \$50,000 to help fund green improvements at the school.

St. Cornelius School recycled more than 885,000 beverage containers - an average of approximately 5,270 containers per student - during the 2011/2012 contest school year. To celebrate their recycling achievements, St. Cornelius School students and faculty joined Dream Machine Recycle

PepsiCo announced that St. Cornelius Rally representatives and notable members of the community, including City of Chicago Mayor Rahm Emanuel, State Senator John G. Mulroe and Alderman John Arena for an award ceremony at the school.

> Approximately 900 schools in 34 states nationwide participated in the Dream Machine Recycle Rally, and an estimated 24 million containers - more than 1.2 million lbs. – have been captured since the program launched in 2010. In its second contest year, the Dream Machine Recycle Rally awarded nearly \$250,000 in contest prizes to participating schools.

Dream Machine recycling initiative, the PepsiCo Dream Machine Recycle Rally program aims to raise awareness among students, grades K-12, about the importance of recycling. Participating schools earn points for every non-alcoholic aluminum can or plastic bottle collected through the program, and can redeem those points online for rewards including school supplies, sporting equipment, gift cards and electronics from local businesses and national retailers. The more cans and bottles that are recycled in Dream

As one pillar within the broader Machines and through the Dream Machine Recycle Rally, the more Pepsi-Co will donate to the Entrepreneurship Bootcamp for Veterans with Disabilities (EBV) to support career training, education and job creation for post-9/11 U.S. veterans with disabilities, so that our nation's heroes can make their own dreams come true

> For additional information, view this article on www.AmericanRecycler.com.

### Rare earth

**■**Continued from Page 1

metal hydride batteries, the company said. "Our goal is to reuse extracted rare earth metals not only for nickel-metal hydride batteries but also for a wide range of our products including motorcycles, automobiles and power products," company spokesperson Marco Frommer said.

Belgian material technology company Umicore has developed a process that, in broad outline, works similarly to the one described by Honda, in that it concentrates rare earth metals in the stream of materials from battery recycling to a level similar to that of mined ore. Working with a French company, Umicore has demonstrated its process and is building a new recycling facility

Mark Caffarey, a North Carolinabased executive vice president at Umicore, said the European facility will be able to handle 150,000 electric vehicle

batteries per year. In the U.S., the company has a North Carolina dismantling facility to prepare batteries for shipment to Europe for processing. They will add additional dismantling facilities in North America as needed, Caffarey said.

Kinsbursky's foray into recycling rare earth metals from batteries is also about to get under way. Construction of the plant building is complete, according to the company, and they are now acquiring equipment. "We should have battery lines in place and in operation by the end of the year," president Steven Kinsburksy said.

#### The Recycling Cost-Benefit **Equation**

One of the benefits of recycling rare earth metals from batteries is that a supply of recycled lanthanum should be more reliable than relying on virgin Chinese sources. Recycling also uses less energy and emits less carbon dioxide than mining. The economics are less firm, but Caffarey said there is a financial justification for recycling rare earths. While pricing for lanthanum is

less clear than for nickel and cobalt, which also are obtained from recycling batteries, that may not always be the case.

"Who knows what the value of those materials is going to be in 10 years' time," Caffarey said. "I do believe it will be going up, because we're consuming more and more devices that need these materials. So to be able to give these elements another life is definitely of value."

Regulatory obstacles to recycling are not a major problem at present, especially in the U.S. where applicable regulations are almost non-existent compared to Europe, according to Caffarey. "If there are regulations in the U.S., they're more on a state-by-state level than across the nation," he notes. "An unclear regulatory environment doesn't help industry develop something. So that could be a barrier."

A bigger issue is the volume of materials to be recycled. Electric vehicle batteries have a useful life of at least 10 years. As a result, only now are the first used hybrid batteries from the Prius,

which entered the global market in 2000, entering the recycling stream. And, notes Kinsbursky executive vice president Todd Coy, it wasn't until 2005 that hybrid vehicle sales really took off. So it will be at least another couple of years before volumes of rare earth-containing batteries are sufficient to reach commercially viable levels.

There is also some question about who will pay for recycling efforts. With the exception of some elements such as cobalt, the components in the batteries are not reliably valuable enough to pay for the recycling. Producers such as automakers will likely be asked to help make up the difference, Caffarey said.

Right now, recycling of the rare earth contained in electric-drive vehicle batteries is in its infancy. But indications are electric-drive battery recycling will expand quickly, perhaps rivaling the size and success of that of lead-acid batteries. Said Caffarey, "I see in the coming years, a bright future for a recycling process that allows recovery of the nickel and the rare earth."





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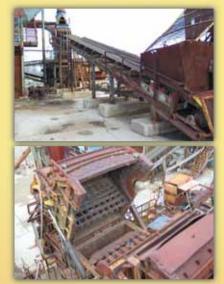
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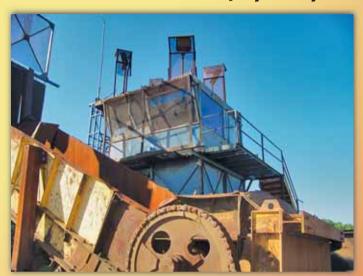
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