

**Board of Directors Meeting Highlights
Held on June 21, 2018 at 9:00 AM
at the MRF Board Room**



Update on China Waste Import Restrictions and Impacts on Provincial and Local Recycling Programs

Now that China has implemented waste import restrictions and recycling programs and operations are being affected in many parts of the country, SWANA is providing an update so you can be informed about the latest developments and participate in upcoming events that will help you and recycling stakeholders in your state respond to the situation.

In January 2018, China's ban on 24 categories of scrap and recyclables took effect, and in March 2018, the 0.5 percent contamination ("carried waste") standard was implemented. These actions have caused a dramatic decline in the amount of scrap and recyclables exported from Canada to China.

As a result, other countries, primarily in Asia, have increased their import of these materials from Canada and other countries. In recent months, several of these countries, particularly Vietnam and Indonesia, have announced measures to reduce the flow of recyclables into their ports. In May, Vietnam advised that it would not accept imported containers of plastic from other ports from June 25 to October 15, due to the overwhelming volume of material being received. Indonesia recently announced that it has started pre-shipment inspection of all fiber imports. These actions have significantly disrupted commodity markets and the international movement of scrap and recyclables.

SWANA has taken aggressive steps to respond to these disruptions. Earlier this year, SWANA established a Recycling Task Force (RTF) consisting of industry and municipal leaders from the United States and Canada to help guide our response. The RTF, which has held several conference calls, has prioritized: (1) identifying best practices for reducing contamination of curbside recyclables; (2) creating demand for recycled content; and (3) calling on the U.S. Congress to include support for recycling in the Infrastructure bill.

SWANA is working with other recycling stakeholders to amplify our messages and concerns. A group of associations and organizations met this Spring to collaborate on improving the quality of the recycling stream and address the challenges posed by China's waste import restrictions, and a follow-up meeting will occur at WASTECON® in Nashville, Tennessee. A similar group, whose membership overlaps somewhat with the group identified above, submitted a letter in April 2018 to the congressional leadership in the U.S. urging inclusion of recycling-related funding in the Infrastructure bill. SWANA is a leading and active participant in both groups.

SWANA is also providing education on the impact of the Chinese waste import restrictions at online and in-person events. This subject was included in numerous SWANA chapter conferences and events earlier this Spring, and SWANA will be holding a webinar on June 28th at 1:45pm EDT exploring how the recycling landscape has changed and what provincial and local officials need to do to maintain sustainable recycling programs.

We are also holding a MRF Summit at WASTECON in Nashville, Tennessee on August 22-23. We are partnering with the Institute of Scrap Recycling Industries (ISRI) to develop this event, which is intended to bring together provincial/local government officials, recycling industry leaders, consumer brand owners, and others to review the changing market for recyclables and potential solutions to current challenges. The MRF Summit provides a unique opportunity for all recycling stakeholders to gather to discuss these issues and establish productive working relationships for the future.

York University Study Finds Recycling Bags Better Than Carts At Reducing Contamination And Program Costs

Recycling bags could be key to righting Canada's recycling woes, reducing contamination, and capturing lost revenue, according to a new study by researchers at York University.

The York study "Thinking Beyond the Box" – an examination of collection mediums for printed paper and packaging waste using publicly available information and surveys with stakeholders – comes at a time when municipalities are grappling with meeting increasingly stringent standards from China, which buys around two-thirds of North America's recycling.

Cities across Canada have depended on the sales of these items to China – in some cases, they offset over 20% of the costs of the city's overall program – which is why it's critical that a solution be found.

Under its National Sword policy, China is refusing to accept recyclables with more than 0.5 per cent contaminated materials. Contamination includes food residue, non-recyclable materials, or products ending up in the wrong stream (i.e. plastic with paper).

To put it in contrast, cities like Toronto, Edmonton and Halifax, have reported upwards of 20 per cent contamination.

Peel Region is a prime example of the potential cost of contamination. After China turned away 13,000 tonnes of product from the region's paper recycler Canada Fiber, Peel Region will likely be saddled with a \$1.7 million bill for the loss.

And the trend towards cart-based, automation systems could be exacerbating the problem, says Dr. Calvin Lakhan, co-investigator of the "Waste Wiki" project at York University, and the corresponding author of the report.

"From a municipal perspective, the contamination rate more than doubled if not tripled after switching to a cart-based collection system," he says. As a result, revenue from post-recyclable materials – the same revenue expected to offset the cost of these programs – has fallen.

The York study found that contamination was eight per cent lower in bag-based, or bag and box-based systems when contrasted with cart or box-based systems.

"To date, we've very narrow-mindedly focused on two solutions... it's very obvious that a third and if not preferable solution exists," says Lakhan. He points out that urban centres like Halifax and Edmonton already include bags as part of their recycling programs.

Recyclable bags restrict contamination to the individual bag rather than the entire recycling cart's contents, giving collectors an additional opportunity to screen the product for things like food residues or non-recyclable materials, improving recovery rates. They also offer households and businesses a chance to add-on capacity as needed.

"Under the current system, municipalities using only cart-based systems aren't getting the returns they should be," says Mike Pilato, general manager for Clorox Canada, (which sponsored the study but gave researchers "complete discretion and latitude" to conduct it as they saw fit). "Recycling bags give communities an opportunity to improve their existing system, while amortizing their current investment."

Lakhan's "Thinking Beyond the Box" study makes a compelling case for bringing recyclable bags into the equation as municipalities look to update their current systems to meet the changing demands from places like China. There is both a performance and cost advantage of using bags versus cart or bin-based programs.

"The title of the study captures it – municipalities haven't had this information to make educated choices," says Pilato. "As they're struggling with this new reality, recycling bags are an attractive option that allows them to make progress with their existing system while they think about another way to do things."

A&W Canada Takes The Lead On Eliminating Plastic Straws

A&W Food Services of Canada Inc. is marking World Oceans Day by eliminating all plastic straws from all restaurants by the end of this year. It will be the first quick service restaurant chain in North America to make this commitment.

“Reducing waste from landfills is a top priority for A&W and this is one big way that we can make a difference,” says Susan Senecal, A&W Canada’s president and CEO.

“We are proud to make this change, which has been driven by the wishes of our guests, franchisees, and staff.”

A&W will provide guests with the option of a paper straw. The paper straws are 100 percent biodegradable, compostable and are sustainably sourced. They last two to three hours in a drink without breaking down, but naturally biodegrade in three to six months in the environment. This switch to paper will keep 82 million plastic straws out of landfills every year.

“Introducing packaging innovations that reduce waste is key to A&W’s environmental strategy,” explains Tyler Pronyk, A&W Canada’s director of distribution, equipment and packaging.

“By using compostable packaging, real mugs, plates and cutlery, we are diverting millions of single-use packaging from landfills every year.”

“Eliminating plastic straws is another big step for us. As we learn more about new tools and sustainable practices, we look forward to more improvements ahead,” he adds.

NYC Councilman Proposes a Ban on All Plastic Straws in NYC

Plastic straws may soon be on the chopping block. An NYC councilman is introducing a bill today hoping to ban the use of plastic straws in restaurants, bars, and cafes across the city — joining a growing national movement to mitigate the environmental impact of the utensil.

Councilman Rafael Espinal, who represents portions of Bushwick, Bed-Stuy, Brownsville, Crown Heights, Cypress Hills, and East New York, is putting forth the bill today. He tells the Times that it’s an urgent environmental issue, pointing to an incident in April where a whale washed to the shore of Spain with more than 60 pounds of trash inside of it.



Unlike other forms of plastic, plastic straws cannot be recycled, according to the Wildlife Conservation Society advocacy campaign Give a Sip — making them a top 10 type of debris that end up in the ocean.

If the bill passes, no food service business would be able to offer single-use plastic straws or coffee stirrers, and people who disobey the law will be fined, with the penalty starting at \$100.

Though Espinal points to the whale incident as what prompted him, in fact, the no-straw movement has gained a lot of traction in the press in the last couple months. In January, a Southern California official suggested eliminating a customary straw at full-service restaurants, meaning people only got one if they requested it. Shortly after, Malibu officially banned plastic straws, and Portland restaurants and bars started a big movement, too.

In New York, dozens of restaurants and bars have said that they, too, are ditching plastic straws. Last week, Danny Meyer announced that Union Square Hospitality Group would also be replacing plastic straws with a “biodegradable alternative.”

Espinal says he doesn’t “believe there any huge obstacles,” saying it’s not a necessity for most people. But like with the proposed plastic bag ban and the styrofoam ban, it will likely still face resistance from New Yorkers and from the small business owners who make up a huge number of people impacted.

Nespresso And Canada Post Partner For Capsule Recycling

As of June 11, consumers living in Alberta, Saskatchewan, Manitoba, Ontario, all of the territories and all of Atlantic Canada will be able to recycle their used aluminum Nespresso capsules by simply sending them back through the mail, at no additional cost.

“The Red Bag solution aims to increase the collection capacity of used aluminum Nespresso capsules by making it as easy as possible for our customers to participate,” says Jean-Luc Valleix, Nespresso Canada president.

“We have always set ourselves apart, as evidenced by our decision to develop capsules with aluminum, a material that not only preserves the freshness of coffee grounds but is also infinitely recyclable. Nespresso has been committed to ensuring sustainability for more than 25 years, taking an active stance in working with local partners and governments and investing in tailored recycling solutions across Canada and around the world.”

From now on, customers can simply place their used Nespresso aluminum capsules in a fully recyclable Red Bag provided for free by Nespresso Canada when coffee capsules are purchased. Then they just drop off the sealed capsule-filled bag at a Canada Post outlet or in a red Canada Post mailbox, at no extra cost.

“We are delighted to partner with Nespresso Canada and to help it achieve its goals,” says Rod Hart, Canada Post’s vice-president, parcels and international business.

“We take great pride in helping Canadian businesses grow, and in offering more convenience to busy Canadians.”

Nespresso offers the only complete and fully recyclable solution, repurposing both the capsule and the coffee grounds, and preventing the soiling of other recyclable materials. The used aluminum capsules are shipped to a local partner where they undergo a process, the first of its kind in Canada, which mechanically separates the coffee grounds from the capsule. The aluminum, an infinitely recyclable material, is repurposed and the coffee grounds are transformed into quality compost, used by farms. The recycling process is entirely supported and paid for by Nespresso at no extra cost to consumers.

Nespresso is currently launching, or has launched, recycling solutions in all provinces and territories with the goal to continue expansion until there is full coverage in every municipality in Canada, tailored to local realities. An example of a local solution is Nespresso’s Green Bag recycling program that was recently launched as a pilot in the City of Vancouver, Anmore and Coquitlam in British Columbia and that is currently available in more than 300 municipalities in the province of Quebec. Residents can simply put their used capsules in a fully recyclable Green Bag and place the sealed capsule-filled bag in their household’s recycling bin.

Nespresso also continues to offer its Black Bag recycling solution where consumers can place their used Nespresso aluminum capsules in a fully recyclable Black Bag and bring to one of the 52 drop-off locations across Canada, including Nespresso boutiques and retail partner stores.

The Red Bag, Green Bag and Black Bag recycling solutions are part of the global Nespresso program, The Positive Cup, which focuses on three areas, namely providing 100 per cent sustainably sourced coffee, making use of 100 per cent responsibly managed aluminum and achieving its goal of a 100 percent carbon neutral footprint by 2020.



Moving Canada Toward Zero Plastic Waste

Plastics are part of the everyday lives of most Canadians. Globally, since the 1950s, plastics production has increased more than any other manufactured material, thanks to their low cost, durability and utility. But the amount of plastic designed to be used once and then thrown away leads to a significant waste of resources and energy—and the litter can pollute our environment and pile up in our landfills.

Around the world, people and companies throw away between \$100 and \$150 billion worth of plastic packaging each year. Plastic waste and marine litter, including microplastics (particles of plastic that are smaller than 5 mm), pose a serious threat to the health of our oceans, waterways and well-being.

Marine litter is a global problem: it's also found on all of Canada's coasts and in freshwater areas, including the Great Lakes.

It's time to take action – together, we can eliminate plastic waste and reduce marine litter in Canada.

Did you know

- Most marine litter (about 80%) enters the water from land
- Each year, globally, about 8 million tonnes of plastic waste enter the oceans
- This is like dumping the content of one garbage truck full of plastic into the ocean every minute
- At this rate, plastics could outweigh fish in the oceans by 2050
- More than 600 marine species are harmed by marine litter and at least 15% of those are endangered
- It's estimated that less than 11% of plastics are recycled in Canada – similar to the global rate of about 9%
- Worldwide, roughly 90% of new plastic products are made from fossil fuels
- Recycling 1 tonne of plastics prevents up to 2 tonnes of carbon pollution
- In 2010, Canada released about 8,000 tonnes of plastic waste into waterways – that's as heavy as 75 Blue Whales
- Since 1994, 700,000 volunteers have collected over 1.2 million kg of waste from shorelines across Canada while participating in the Great Canadian Shoreline Cleanup

Individuals can make a big difference by reducing the amount of single-use plastic products they use (like disposable coffee cup lids, straws and packaging) – but we also need to take action as a country.

That's why the federal government, through Environment and Climate Change Canada, is asking Canadians to share their ideas and suggestions, through email, mail and PlaceSpeak, an online engagement platform. Your feedback will help develop a federal-provincial-territorial approach to manage plastic waste and reduce marine litter.

Recycle BC Phasing in Collection of Other Flexible Plastic Packaging

As of Friday, June 1, stand-up pouches, crinkly potato chip bags and net bags for produce – just a few examples of items that fall under the umbrella category of Other Flexible Plastic Packaging – will be collected by 116 depots throughout the province as part of a research and development project led by Recycle BC. This material is accepted at participating depots only, it is not accepted in curbside or multi-family recycling.

The project will determine how best to recycle materials in this category, which is one of the fastest growing packaging types on the market, and one of the largest categories of packaging not previously collected under the residential recycling program. The not-for-profit has partnered with Merlin Plastics to research a solution to recycle this type of packaging, which presents challenges due to the combined

materials involved. Any packaging collected during the project that can't be recycled will be recovered and produced into engineered fuel. The project will also be supported by Green by Nature, Recycle BC's post-collection partner.

The program expansion is being rolled out in three phases, with the first round of depots beginning collection June 1, followed by additional depots voluntarily beginning collection September 1. As of January 1, 2019, all Recycle BC depots in the province are expected to collect this type of packaging.

Examples of materials that are accepted as part of Other Flexible Plastic Packaging:

- Stand-up and Zipper Lock Pouches
 - Zipper lock pouches for frozen foods like prawns, berries and prepared food
 - Zipper lock bags for fresh foods like grapes, berries and deli meat
 - Stand-up pouches for baby food and hand soap refills
 - Stand-up and zipper lock pouches for items like dried fruits, granola, sugar, oatmeal, quinoa, dish detergent pods and grated cheese
- Crinkly Wrappers and Bags
 - Bags for potato chips, candy, dried pasta, coffee and cereal
 - Cellophane for flowers and gift baskets
 - Wrappers for cheese slices, snack bars and instant noodles
- Flexible Packaging with Plastic Seal
 - Packaging for fresh pasta, pre-packaged deli meats and pre-packaged cheese
- Woven and Net Plastic Bags
 - Net bags for avocados, onions, oranges, lemons and limes
 - Woven plastic bags for rice
- Non-food Protective Packaging
 - Padded protective plastic like plastic shipping envelopes, plastic air packets and bubble wrap
- Examples of materials that will not be part of the expanded program:
 - Plastic Squeeze Tubes
 - Plastic-lined Paper
 - Paper-lined Plastic
 - Plastic Strapping
 - 6-pack Rings
 - Biodegradable or Oxo Plastic
 - PVC/Vinyl

To learn more about the Other Flexible Plastic Packaging program and to view a list of depots, please visit RecycleBC.ca/FlexiblePackaging.

Quebec Study Defends Plastic Shopping Bags As Not Single-Use

Conducted by the Government of Quebec, the Life Cycle Analysis (LCA) found that no replacement option has an environmental advantage in the event of a ban on plastic shopping bags.

A Life Cycle Analysis (LCA) is a cradle-to-grave analysis that assesses the environmental impacts associated with all stages of a product's life from raw material extraction through manufacture, usage and how it is managed at end of life.

The Quebec Government wanted to provide decision-makers with an impartial, trustworthy, third-party scientific analysis of plastic shopping bags using Canadian and North American data so policymakers can make informed decisions on which bag is the best for the environment.

“Governments across Canada now have home-grown science they can trust to guide decision-making on bags,” says Joe Hruska, Vice President of Sustainability at the Canadian Plastics Industry Association (CPIA). “As an industry, we welcome the Quebec Government LCA findings. They are completely in line with a Government of Denmark LCA which was just made public and at 2011 U.K. Government LCA. All LCAs show scientifically that a ban on plastic shopping bags will actually harm the environment.” <https://www2.mst.dk/Udgiv/publications/2018/02/978-87-93614-73-4.pdf>



The most interesting study finding is that the conventional, thin plastic shopping bag is not a single-use bag because it has a very high reuse rate at 77%. The most common reuse is to manage household waste. Banning of the conventional plastic bag, according to the LCA scientists, will lead to the consumption of even more plastic and the manufacture of garbage bags; kitchen-catcher type bags which are 76% percent thicker.

“This LCA shows that bag bans are not needed in Canada because plastic bags are well-managed by consumers and retailer,” says CPIA’s Hruska. “Canadians are deeply committed to responsible use and the 3R’s. Ironically, reusable bags, the replacement option advocated by some to replace conventional bags, have a much larger carbon footprint and global warming potential.

Environmental Performance Among the Five Disposable Bags studied.

	Human Health	Quality of ecosystem	Use of fossil resource	Abandonment of the environment
Conventional Plastics	■	■	■	■
Oxodegradable	■	■	■	■
Bioplastics	■	■	■	■
Thick Plastics	■	■	■	■
Paper	■	■	■	■

Low impact
 Medium impact
 High impact

The industry which also makes reusable bags points out that people are not aware that reusables bags are not recyclable in North America and at the end of their life, they end up in landfill as garbage while thin plastic shopping bags are highly recyclable. As the Quebec LCA proves the conventional bag is a multi-use, multi-purpose bag while the reusable bag is a single-purpose bag. The LCA report also shows that because reusable bags are very resource-intensive, they must be reused multiple times to equal the environmental impact of the plastic shopping bag used just once.

Hruska adds, “The bag industry believes that every decision made in the name of the environment should be based on science and fact. Too often decisions on bags are made because it sounds good. All too often decision-makers do not assess or decide to ignore the negative unintended consequences which end up causing environmental harm.”

IKEA Phasing Out Single-Use Plastics

IKEA will eliminate all single-use plastic products from its home furnishing range globally by January 1, 2020. This includes straws, plates, cups, freezer bags, garbage bags and plastic-coated paper plates and cups.

IKEA Group will also phase out single-use plastic items offered in customer and co-worker restaurants, bistros, and cafes, including straws, cups, cutlery, plates and beverage stirrers. These changes will also take effect by the end of 2019 across its 29 retail markets, including all IKEA Canada locations.

IKEA is on a journey to become circular in all aspects: from product development, sourcing materials, developing the supply chain, and logistics, to how and where it meets its customers. As part of this commitment, IKEA is finding new and innovative ways to work with renewable and recycled materials and prolonging the life of products and materials.

Revealed at Democratic Design days in Älmhult, Sweden, this announcement is consistent with IKEA's direction to become a circular business, and one of a range of commitments announced as part of the launch of the new IKEA People and Planet Positive strategy. Additional commitments include:

- Designing all new products from the very beginning to be repurposed, repaired, reused, resold, and recycled, generating as little waste as possible – using circular design principles
- Aiming for all IKEA products and packing materials to be based on renewable and/or recycled materials by 2030
- Phasing out virgin fossil plastic from products by 2030
- Offering services that make it easier for people to bring home, care for and pass on products

“Our ambition is to become people and planet positive by 2030 while growing the IKEA business,” says Inter IKEA Group CEO, Torbjörn Lööf.

“Through our size and reach we have the opportunity to inspire and enable more than one billion people to live better lives, within the limits of the planet.”

The IKEA People & Planet Positive strategy sets the direction for IKEA and covers three focus areas: Healthy & Sustainable living, Circular & Climate Positive, and Fair and Equal.

Bringing 3D Printing Back To Polymer Level

Thermosetting photopolymers represent almost 50% of the worldwide 3D printing market. Once the material has been used to create a certain product, however, the shape is permanent and cannot be remoulded or recycled. At least, that was the case before researchers from the Singapore University of Technology and Design (SUTD) took on this modern-day challenge.

A ‘simple’ two-step polymerisation strategy could be the answer to the already impressive waste build-up of 3D printing materials, according to SUTD assistant professor Kavin Kowsari. He urges that the ‘unprocessable nature’ of 3D printed products in combination with the ‘explosion’ of 3D printing has ‘serious’ environmental implications.

A laboratory project conducted by the university group demonstrates that both broken and completely intact 3D printed objects can, in fact, be fixed or melted and made into other products via a process called thermal self-healing.

Kowsari explains that thermal treatments were conducted by placing UV cured samples in a universal heating oven at 180°C for four hours. The star of the first lab test was a 3D-printed rabbit. The sculpture was missing both its ears – but they were easily restored thanks to increased levels of malleability achieved by the process.

The repaired sample recovered around 100% of the stiffness, and 93% of material strength. This indicates that the healing progress ‘robustly bonds’ the separate parts and restores the material’s mechanical performance.

Depending on the shape and size of the material, the 3D printed objects were subjected to thermal treatment for half an hour or less, one hour, 2 hours, 3 hours and four hours.

The researchers found that recycling is now also an option; they successfully managed to grind samples into ‘fine powders’, which were pressed in between foil-coated metal plates.

‘We can exploit this process to combine 3D printing with traditional manufacturing methods, such as molding, pressing, and thermoforming, to increase manufacturing capabilities and decrease manufacturing time,’ the Singapore specialists point out.

London Mulls \$4.4M Landfill Expansion

The City of London’s Managing Director of Environmental and Engineering Services is recommending a new 6.2 hectare cell for the city’s W12A Landfill worth approximately \$4.4 million under a new tender.



In a report headed to London’s Civic Works Committee next week, City Engineer Kelly Scherr states that the currently active waste disposal area (Cell 8) has approximately 12 months of disposal capacity remaining. The new cell will create approximately 1,100,000 m³ of usable disposal capacity, the report states, which will accommodate approximately 3.5 years of waste disposal operation at current landfilling rates.

The construction schedule identifies a tentative start month of June, 2018 and 85 working days to complete the project.

The report states that operating costs are expected to increase approximately \$40,000 per year to treat the additional leachate that will be generated, once Cell 9 is constructed.

The report recommends awarding the \$4.4 million contract to Ron Murphy Contracting Co. Ltd.

Will Electric Trucks Come to Fruition in the Industry? How Far Off Are We?

If an electric refuse truck can be created to introduce more pros than cons, I believe someone will corner the market and create a truck that is both reliable, more efficiently/self-powered and better for the world we live in. Time will tell.

I believe there is an opportunity in the waste refuse market for an electric powered truck. With that said, there are many obstacles that the technology will need to overcome when it is faced with the realization and the demands the waste industry will challenge the technology to overcome. In the past decade, we have introduced increased emission compliance for diesel engines. This has changed the efficiency, power, range and reliability of the diesel motors post-2007. Due to other factors like fuel, labour, and oil, operating and maintenance cost of collection, trucks post-2007 are higher than they used to be.

The tradeoff of these new diesel trucks carries a general consensus no matter who you speak to—increased operating and maintenance cost with lower reliability and longevity of powertrain components. Ask any hauler who wants to spend \$200,000 to \$350,000 for a diesel truck that is more expensive, unreliable, but yet still picks up the same amount of waste as a truck from the 1980s but it is 3x more expensive to purchase. The answer will be that none of us enjoy swallowing that asset cost. It is even harder when new trucks are not reliable due to failed sensors/new emission components. This increased asset cost comes for a number of manufacturing and economic reasons. The first challenge an electric refuse truck will face will be its come-to-market asset cost. The manufacturer will need to come in at a price point that can be justified.

It is no secret that refuse trucks need horsepower and torque. The electric truck should have no problem creating on-demand electric power. The question becomes what the range will equal to go along with it. Refuse trucks are generally stop and go, all day long. The range will be a challenge. The last thing an operator needs is a truck out of charge, away from the yard or charging station. I would imagine, as a start, the electric truck would need to start as a hybrid form. Instead of a diesel motor, have a generator/turbine of some sort that could create power via diesel or natural gas and extend the range. Wrightspeed Powertrains of Alameda, CA has technology based around this concept (www.wrightspeed.com).

Eventually, I would like to see the range extended solely by brake heat or solar power, backed up by larger ranged batteries and a nightly home charging station. Electric refuse trucks would be a welcome idea if their operating cost was consistent, maintenance was reduced, range extended, and ease of operation was favourable compared to diesel and natural gas motors of today.

Increased technology in diesel motors has added a sensor for just about everything. Sensors to read oil, coolant and soot levels is just a start. The problem with all of these sensors is that they fail prematurely or give false readings leading the ECM to shut down a perfectly oiled or lubed engine or transmission. When all sensors are working, new diesel motors exhaust cleaner emissions into our atmosphere. In my opinion, that is all the good that has come out from it though. They are less efficient from a fuel standpoint, have an increased maintenance cost, have more downtime and are proving to be lower in longevity over the life of the asset. If an electric refuse truck can be created to combat all of these struggles and introduce more pros than cons, I believe someone will corner the market and create a truck that is both reliable, more efficiently/self-powered and better for the world we live in. Time will tell. I support the idea greatly. If you do not believe in electric cars or trucks, go take a ride in a Tesla. One stomp of the throttle will have you laughing at the power created from solely electricity. It has been from that point forward (four years ago); I have wanted someone to move this technology to our industry.

Canadian Legislation To Legalize Marijuana For Recreational Use Is Expected This Summer.

The Canadian Trucking Alliance (CTA) is repeating its call for rules to guide random drug testing, following research that shows an increase in positive marijuana tests in U.S. jurisdictions that have legalized the drug.

Since 2016, the number of safety-sensitive workers who tested positive for marijuana increased 39% in Nevada, 20% in California, and 11% in Massachusetts, Quest Diagnostics found in a review of 10 million drug tests conducted in the U.S.

“These increases are similar to the increases we observed after recreational marijuana use statutes were passed in Washington and Colorado,” said Barry Sample, senior director – science and technology.

“CTA has maintained that if risk is to be downloaded to employers as a result of legalization, then we need the necessary tools to help mitigate that risk,” says Jonathon Blackham, the alliance’s director of policy and public affairs.

What Is The Future For Aerosol Cans In America?

Aerosol cans account for nearly half of the materials in the US retail sector covered by the Resource Conservation and Recovery Act. ‘Re-harvesting them can be undertaken in an environmentally protective manner,’ says Scott Fulton, president of the Environmental Law Institute (ELI) which has published a report ‘Considering the Fate of Consumer Aerosol Cans’.

Three-quarters of aerosol containers are made of steel, the rest from aluminium, and ELI calculates that the estimated 3.5 billion steel cans are produced from around 437 500 tons of raw material. If expressed in current prices for recycled steel, this tonnage would have a market value of US\$ 131 million. Approximately 30% of this metal is recycled and only 0.25% remains in the recycle stream after five cycles.

More than 60% of the US population is believed to have access to aerosol can recycling. Roughly 52% of these such schemes accept aluminium cans and 51% accept steel cans. Another 20% of the population has only a drop-off option.

Although most Americans do have access to these recycling programmes, ELI maintains there is not enough information available to determine how many aerosol cans enter the recycling stream. Besides, not all household recycling programs accept aerosol cans: many require householders to dispose of them in hazardous waste collection locations or at particular times.

In California, for example, empty cans may be recycled through curbside pick-up schemes, while full or partially-full containers must be disposed of at local household hazardous waste collection sites.

According to Fulton, an important question to ask in the near future is whether or not the Resource Conservation and Recovery Act should be revised to focus more on resource conservation and recovery. He highlights the importance of minimizing waste generation, boosting reuse and recycling, as well as the recapture of materials.

‘If material is treated as hazardous waste, its fate is certain – the vast majority is incinerated,’ he points out. Apart from the ‘enormous’ cost of this approach, Fulton calls this practice a ‘sustainability tragedy’. Instead of burning materials labelled “hazardous waste”, he advocates finding a better path for waste streams such as aerosols, adding: ‘To me, that sounds like a smart reform, anchored by the sustainability ideal.’

On a positive note, the US Environmental Protection Agency recently proposed a rule to classify at least some aerosols as “universal waste.” This rule, for which consultation closed on May 15, would allow discarded but intact cans to be stored for longer periods and sent to a wider array of destination facilities for disposal or recycling.

New European Targets Set

The Council of the European Union has adopted a waste package which sets out new rules for waste management and establishes legally binding targets for recycling.

Member states will have to meet the following targets as they increase the reuse and recycling of municipal waste:

	By 2025	By 2030	By 2035
Municipal waste	55%	60%	65%

Member states will set up, by 1 January 2025, separate collections of textiles and hazardous waste from households. In addition, they will ensure that by 31 December 2023, bio-waste is either collected separately or recycled at source (e. g. home composting). This is in addition to the separate collection which already exists for paper and cardboard, glass, metals and plastic.

The legislation defines specific recycling targets for packaging:

	By 2025	By 2030
All packaging	65%	70%
Plastic	50%	55%
Wood	25%	30%
Ferrous metals	70%	80%
Aluminium	50%	60%
Glass	70%	75%
Paper and cardboard	75%	85%

The legislation contains a landfill reduction target, and sets minimum requirements for all extended producer responsibility schemes. Producers of products covered by these schemes must take responsibility for the management of the waste stage of their products, and will be required to contribute financially.

Mandatory extended producer responsibility schemes for all packaging have also been introduced. Member states shall endeavour to ensure that as of 2030, all waste suitable for recycling or other recovery, in particular in municipal waste, shall not be accepted in a landfill.

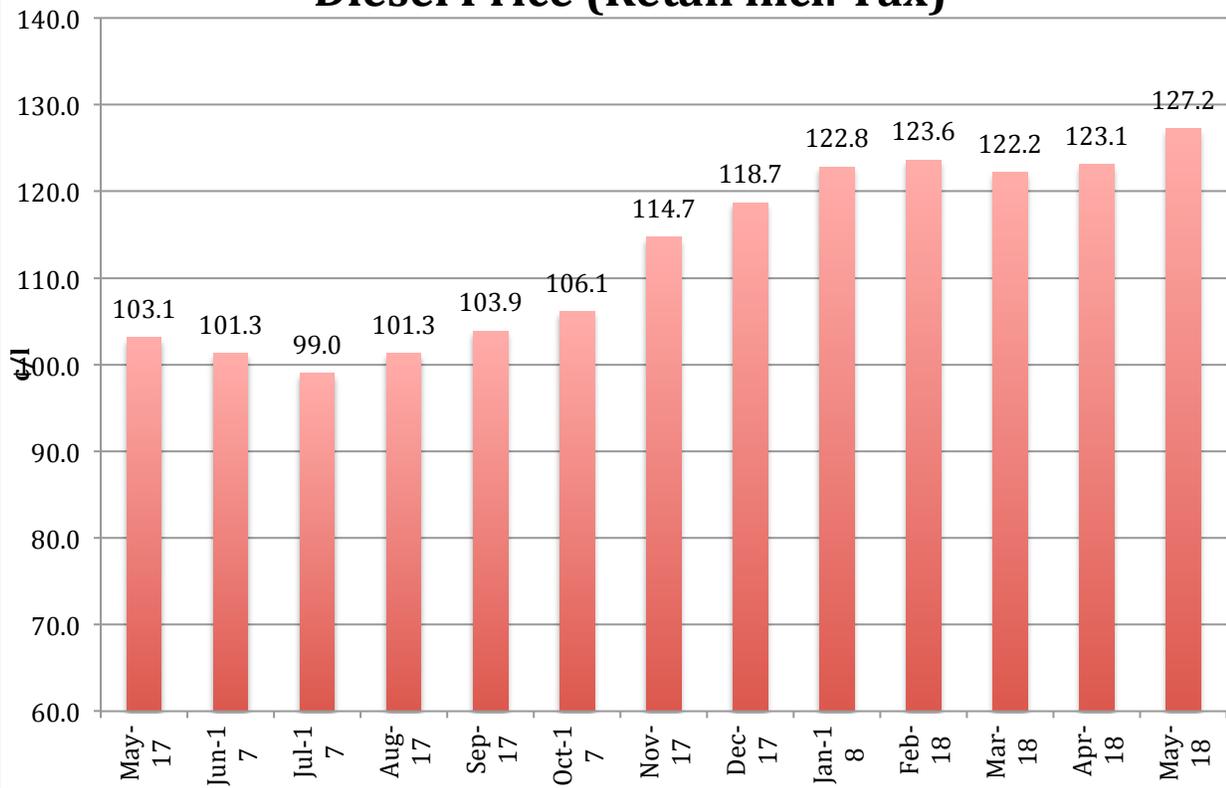
The waste package is intended to lead to more recycling of waste and contribute to the creation of a circular economy. It will encourage the use of recyclable packaging and reusable packaging and will improve the way waste is managed.

The European Commission presented a revised circular economy package on 3 December 2015, including the so-called waste package which consists of four legislative proposals. It addresses environmental problems with transnational implications covering the impact of inappropriate waste management on greenhouse gas emissions, air pollution and littering, including in the marine environment. It ensures that valuable material embedded in waste is effectively re-used, recycled and re-injected into the European economy, and thereby helps to move towards a circular economy and to reduce the EU's dependence on the import of raw materials by promoting the prudent, efficient and rational use of natural resources.

On 19 May 2017, EU ambassadors agreed a mandate on the package, paving the way for trilogues, which kicked off on 30 May 2017. After several rounds of negotiations, a provisional agreement between the Estonian presidency and the European Parliament was reached on 18 December, and EU ambassadors endorsed the agreement on 23 February.

Now that the Council has adopted the legislation, it will enter into force 20 days after its publication in the Official Journal.

Diesel Price (Retail incl. Tax)



Diesel Price (Retail incl. Tax)

