PRESIDENT’S REPORT:
WESTERN PLASTICS ASSOCIATION
SUPPORTS OPERATION CLEAN SWEEP

In 2012 the Ocean Conservancy established the Trash Free Seas Alliance to unite industry, science and conservation leaders in an effort to remove trash from the world’s oceans and waterways. Last December folks from this group along with Algalita, SPI and ACC were surprised to find many plastic pellets on a stretch of sand in Long Beach [see photos]. Although more research needs to be done, this confirms the importance of our members revisiting Operation Clean Sweep or facing heavy fines and, more importantly, damage to our marine ecosystem. Algalita’s founder, Captain Charles Moore, believes that plastic debris should be seen as the No. 1 threat to the planet.

This video clip from 2007 might jog your memory of Captain Charlie’s past efforts and focus [click here].

Although his point might be a bit overstated, the importance of our active participation in OCS is imperative here on the West Coast with our long coastline and many plastic manufacturing plants. For this reason we have decided to reprint an article I posted from 2013 for your review.

WPA TODAY DECEMBER 2013
Our industry is too often plagued by images of plastic on local beaches. While there is some debate over the ultimate responsibility for much of this waste, there is one aspect of marine debris that we are responsible to manage, plastic pellets. Plastic pellets that have spilled at manufacturing facilities or in transit can be washed down storm drains and end up on our beaches, in our oceans and waterways. Although we have made progress dealing with this issue, it is a bigger problem than many realize and the solution rests solely with us. To this end, the WPA has recently signed on as a supporting (Continued, see OCS, page 2)
member of Operation Clean Sweep (OCS) to give our members the tools to keep resin pellets out of the environment.

Operation Clean Sweep is an international program designed to empower and aid employees of the plastics industry to keep resin pellets out of the marine environment. OCS was created with many different levels of the plastic industry in mind; including resin manufacturers, plastic processors, trucking and rail companies transporting the pellets, and the plastic machinery and equipment companies that use the resin pellets. Operation Clean Sweep is a simple step to help strengthen your company's sustainability initiatives, safety record, financial bottom line and reputation in the community.

Becoming a member of OCS is simple.

Visit www.opcleansweep.org and sign the pledge [click here].

You will immediately be able to take advantage of all of the OCS tools posted online. These include customizable checklists for both employees and managers to conduct site and equipment audits. Also included are posters to hang around the work place to help encourage everyone to help reduce pellet waste. You will receive an OCS flag, a certificate of participation and an OCS logo to highlight your company’s commitment to sustainability.

The WPA is committed to a sustainable future. With the involvement of companies such as yours, we can keep resin pellets where they belong: in our plastic products, not in the ocean. What are you waiting for? Take the OCS pledge!

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The Extrusioneers

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UPCOMING WPA PROGRAM: PACIFIC NW MEETING

WPA IN RICHMOND, BC

Extended Producer Responsibility

APRIL 4, 2017

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• Find out what’s happening with BC Extended Producer Responsibility
• As U.S. states consider EPR, get educated
• Do your customers want to have answers?
• ZipPak research on consumer packaging—what is important and what is not

Guest Speakers: Daniel Lantz, CEO Green by Nature, BC EPR; and Margaret Angelovich, ZipPak

Dan is the Chief Operating Officer for Green by Nature EPR, the company responsible for the management of residentially generated recyclable materials across the entire province of British Columbia.

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EVENT SPONSORSHIP:

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Contact Laurie Hansen for details on how your company can market its services and products to key industry professionals.

916.930.1938 or info@westernplastics.org

WHEN:
Tuesday, April 4, 2017
5:30 PM Registration/Networking
6:30 PM Dinner/Meeting

WHERE:
Richmond Country Club
9100 Steveston Hwy
Richmond BC V7A 1M5

COST:
RSVP by March 28, 2017
WPA Member: $70
First-Time Attendee: $70
Non-WPA Member: $100

RSVP after March 28, 2017
WPA Member: $90
First-Time Attendee: $90
Non-WPA Member: $120

Walk-ins at the event: Add $10.
Cancellation Policy: Cancellations must be made 48 hours prior to the event. Registration is non-transferable to another event; send a substitute if you are unable to attend. No-shows will be billed.

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May 17–19, 2017
Sonoma, California

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Since 2014, support for this conference has grown every year and is a “Must Attend” meeting filled with timely, pertinent information and great opportunities.

Wednesday, May 17
6:00 PM Early Opening Reception (leaving you time to make your own dinner plans)

Thursday, May 18
8:30–11:30 AM Conference Program
Noon–6 PM Networking activities: Golf, Race Car Driving, Wine Tasting, Relaxation
6 PM Dinner & Wine Olympics

Friday, May 19
8:30 AM–Noon Conference Program

EARLY BIRD REGISTRATION ENDS APRIL 20, SO REGISTER SOON!

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BOOK YOUR ROOM ONLINE
Rooms and special rates are limited: reservations can only be guaranteed until April 20.

For Sponsorship Opportunities, contact Amy Quist at the WPA office: 916.930.1938.

Smiles from CFECA’s last fun-filled wine country conference—2002!
UN Environment launched today an unprecedented global campaign to eliminate major sources of marine litter: microplastics in cosmetics and the excessive, wasteful usage of single-use plastic by the year 2022.

Launched at the Economist World Ocean Summit in Bali, the #CleanSeas campaign is urging governments to pass plastic reduction policies; targeting industry to minimize plastic packaging and redesign products; and calling on consumers to change their throwaway habits – before irreversible damage is done to our seas.

Erik Solheim, Head of UN Environment, said, “It is past time that we tackle the plastic problem that blights our oceans. Plastic pollution is surfing onto Indonesian beaches, settling onto the ocean floor at the North Pole, and rising through the food chain onto our dinner tables. We’ve stood by too long as the problem has gotten worse. It must stop.”

Throughout the year, the #CleanSeas campaign will be announcing ambitious measures by countries and businesses to eliminate microplastics from personal care products, ban or tax single-use bags, and dramatically reduce other disposable plastic items.

Ten countries have already joined the campaign with far-reaching pledges to turn the plastic tide. Indonesia has committed to slash its marine litter by a massive 70 percent by 2025; Uruguay will tax single-use plastic bags later this year and Costa Rica will take measures to dramatically reduce single-use plastic through better waste management and education.

Each year, more than 8 million tonnes of plastic ends up in the oceans, wreaking havoc on marine wildlife, fisheries and tourism, and costing at least $8 billion in damage to marine ecosystems. Up to 80 percent of all litter in our oceans is made of plastic.

According to some estimates, at the rate we are dumping items such as plastic bottles, bags and cups after a single use, by 2050 oceans will carry more plastic than fish and an estimated 99 percent of seabirds will have ingested plastic.

Media personality Nadya Hutagalung supports #CleanSeas by calling on the cosmetics industry to stop adding microplastics to their products. As many as 51 trillion microplastic particles – 500 times more than stars in our galaxy – litter our seas, seriously threatening marine wildlife.

Singer-songwriter and UN Environment Goodwill Ambassador Jack Johnson pledged to engage with fans and encourage venues for his 2017 Summer Tour to reduce single-use plastics. Johnson is also promoting a new documentary The Smog of the Sea, which highlights the issue of microplastics permeating the world’s oceans.

“I support the Clean Seas campaign because I believe there are better alternatives to single-use disposable plastics, and that we as consumers can encourage innovation and ask businesses to take responsibility for the environmental impact of the products they produce,” said Jack Johnson.

“We can all start today by making personal commitments to reduce plastic waste by carrying reusable shoppings bags and water bottles, saying no to straws and choosing products without microbeads and plastic packaging. We can also support the efforts of the emerging youth leaders around the world working for healthy and plastic free oceans.”

Globally recognized brands are also joining the fight. DELL Computers unveiled today a commercial-scale supply chain using plastic which has been fished out of the sea near Haiti. The computer giant will use the recovered ocean plastic in its product packaging.

“DELL is committed to putting technology and expertise to work for a plastic-free ocean,” said (Continued, see #CleanSeas, page 6)
#CLEANSEAS ASKS PEOPLE TO RE-THINK THEIR HABITS [CONT’D]

Dell’s Vice President for Global Operations Piyush Bhargava. “Our new supply chain brings us one step closer to UN Environment’s vision of Clean Seas by proving that recycled ocean plastic can be commercially re-used.”

All these actions will be crucial to stemming the tide of marine litter. Today, we are producing twenty times more plastic than in the 1960s. Around one third of all plastic is used for packaging. By 2050 our plastic production will have to grow three to four times to satisfy our demand. A large portion will end up in oceans where it will remain for centuries.

Actor Adrian Grenier, known for his role in hit TV show and film Entourage, and founder of Lonely Whale Foundation has joined the #CleanSeas campaign, asking people to re-think their daily choices.

“Whether we choose to use plastic bags at the grocery store or sip through a plastic straw, our seemingly small daily decisions to use plastics are having a dramatic effect on our oceans,” said Adrian Grenier. “We have the power to effect change.”

“Today I take this public pledge to do my part to refuse single use plastics, starting with the plastic straw, and also reaffirm my commitment to work with leaders such as Dell to reduce plastic packaging. If we start with one small change and hold each other accountable, I believe that together we can inspire global action for the health of our oceans.”

Major announcements are expected during The Ocean Conference in New York at the UN Headquarters 5–9 June, and the December UN Environment Assembly in Nairobi, Kenya.

Additional Quotes

Hamish Daud, Indonesian presenter and actor said: “We hail from one of the most beautiful places on the planet, but our nasty plastic addiction is slowly choking our precious coasts and the marine life we share them with. Join with me to turn the tide on plastic—together we must start saying ‘no’ to unnecessary plastic in our daily lives that is ending up in the sea—decline the plastic shopping bags, reject the straws, replace plastic bottles with filtered water. I stand today with UN Environment to urge governments, industry and consumers to put an end to our dangerous plastic habit.”

Eneida de León, Minister of Housing, Territorial Planning and Environment of Uruguay: “Our goal is to discourage the use of plastic bags through regulations, give an alternative for workers in the waste sector, and develop education plans regarding the impact of the use of plastic bags on our environment. These actions are key to achieving sustainable development. Uruguay is committed to moving forward in that direction, and the Clean Seas campaign is certainly a very valuable contribution.”

Edgar Gutiérrez Espeleta, Minister of Environment and Energy of Costa Rica: “Costa Rica recognizes the risks and damage caused by the effects of single-use plastic and non-recoverable micro plastics on the marine environment. We strongly favour the engagement of all relevant stakeholders, including civil society, private sector and all citizens to support national and global efforts. Only through a real and active engagement of all of us, with the help of dynamic partnerships, we will be able to effectively combat marine litter.”

Vidar Helgesen, Minister of Climate and the Environment of Norway: “Keeping our seas clean and our marine life safe from plastic is a matter of urgency for Norway. Marine plastic litter is a rapidly increasing threat to marine life, seafood safety and negatively affects the lives of people in coastal areas all around the world. We encourage every country in the world to join the Clean Seas campaign and develop effective measures to avoid single-use plastic ending up in the environment. Our oceans cannot wait any longer.”

Nadya Hutagalung, media personality: “On bathroom shelves around the world sit products that are destroying life in our oceans. Tiny pieces of plastic in our face scrubs and toothpastes, used to make products feel smooth, are washed away in drains to then fill the stomachs of marine animals who confuse it for food. No beauty product is worth destroying the world’s beautiful oceans, not to mention our own human well-being. There are alternatives! So let’s choose what we buy carefully and together, with the combined power of our voice and our wallets, we can urge beauty companies to end their use of microbeads.”

Segolene Royal, Minister of Ecology, Sustainable Development and Energy: “I welcome the launch of the Global Marine Litter Campaign by UNEP, and I am pleased to announce that I have signed an agreement to support UNEP financially in our common fight against this global threat, in the context of the International coalition against plastic bags and plastic pollution.”

Peter Thomson, President of the UN General Assembly said: “The Ocean is the lifeblood of our planet, yet we are poisoning it with millions of tonnes of plastic every year. The time has come to turn the tide on marine litter. As the world’s nations prepare for The Ocean Conference to be held in New York, 5–9 June, I urge all of them to join the Clean Seas campaign and make an ambitious pledge to reduce single-use plastic. Be it a tax on plastic bags or a ban on microbeads in cosmetics, each country to do their bit to maintain the integrity of life in the Ocean.”

ABOUT #CLEANSEAS: The #CleanSeas campaign is a global movement targeting governments, industry and consumers to urgently reduce the production and excessive use of plastic that is polluting the earth’s oceans. UN Environment aims to transform all spheres of change—habits, practices, standards and policies around the globe.

Ten countries have already joined the campaign: Belgium, Costa Rica, France, Grenada, Indonesia, Norway, Panama, Saint Lucia, Sierra Leone and Uruguay. ●

MARINE DEBRIS:
PLASTIC MAKERS SUPPORT EFFORTS TO ELIMINATE OCEAN PLASTICS

BY STEVE RUSSELL, AMERICAN CHEMISTRY COUNCIL

The United Nations Environment Programme (UNEP) today launched its Clean Seas campaign, a global initiative to eliminate major sources of marine litter, such as microplastics in cosmetics and wasteful uses of single-use plastic by the year 2022. The American Chemistry Council released the following statement, which may be attributed to Steve Russell, vice president of ACC’s Plastics Division:

“Plastics provide tremendous benefits to society and our planet, such as reducing greenhouse gas emissions, food waste and energy use—but used plastics don’t belong in our ocean. That’s why the world’s plastics makers launched the Declaration of the Global Plastics Associations for Solutions on Marine Litter in 2011. Today, 70 associations from 35 countries have signed onto the Global Declaration [view here] Collective under the Global Declaration, our industry has implemented over 260 projects worldwide [view here] to reduce marine litter, and we know there’s much more to be done.

Scientific and political leaders have identified the need to improve land-based waste management—particularly in rapidly industrializing economies—as the single most important step we can take to reduce the flow of waste into the ocean. Plastic makers are therefore actively engaged with the Trash Free Seas Alliance to deploy pilot programs and practical solutions in the Asia-Pacific region. Leaders from the Asia Pacific Economic Cooperation (APEC) forum are now calling for improved waste management, and our industry is partnering with other stakeholders to improve collection, containment, recycling and energy recovery in the region.

The United Nations Clean Seas campaign is another sign that policy makers globally recognize the link between our actions on land and impacts in the ocean. We look forward to sharing programs and practical experiences learned from progress already underway in Asia-Pacific and elsewhere.

Plastic makers also look forward to sharing lifecycle and other data to help inform policy suggestions, including the recent report from Trucost (“Plastics and Sustainability”) [view here] which quantifies the impacts of plastics and their alternatives in packaging and consumer goods in order to reduce environmental impacts.”

ABOUT ACC

The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people’s lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a $797 billion enterprise and a key element of the nation’s economy. It is the nation’s largest exporter, accounting for fourteen percent of all U.S. exports. Chemistry companies are among the largest investors in research and development. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation’s critical infrastructure. ●

DELL WILL START USING OCEAN PLASTICS IN PRODUCT PACKAGING.

**MARINE DEBRIS:**

DELL SEES A SEA OF POSSIBILITIES IN OCEAN PLASTICS

BY JARED PABEN, RESOURCE RECYCLING

Dell’s announcement that it will use HDPE recovered from Haiti’s beaches, waterways and adjacent streets in its packaging garnered headlines far and wide.

But in a recent interview with Plastics Recycling Update, a company official made clear the effort is about more than a quick hit of good public relations: The technology giant is working to expand its use of ocean plastics, and it may start sourcing them from Asia.

“One of the goals we had is to set up a commercially viable supply chain for ocean plastic and one that can actually be expanded,” said Oliver Campbell, Dell’s director of procurement and packaging innovation.

Campbell spoke about the Texas-based company’s efforts to prevent ocean plastics while providing feedstock for recycled-content trays holding its XPS 13 2-in-1 notebook device. He shed light on the supply chain—one that differs notably from a recent effort by Procter & Gamble—and packaging innovation.

Campbell spoke about the Texas-based company’s efforts to prevent ocean plastics while providing feedstock for recycled-content trays holding its XPS 13 2-in-1 notebook device. He shed light on the supply chain—one that differs notably from a recent effort by Procter & Gamble and partners to use ocean plastics in Head & Shoulders bottles—and he talked about where Dell may go next.

Dell plans to use 8 tons of recovered ocean plastics in 2017. It aims to scale that up to 10 tons in 2018. The pilot project involves relatively small volumes, but it allows Dell to chart a more intelligent path as it scales up.

“This allows us to get experience with the supply chain, various characteristics of ocean plastics, and it helps us take a look at alternative materials that we find in that ocean plastics ‘supermarket,’” Campbell said.

**Finding the pollution**

When Dell announced it was going to start using ocean plastics in product packaging, it also released a white paper on building supply chains using ocean plastics. Campbell is one of the authors. The paper shed light on how Dell found volumes of discarded plastics in Haiti, and it helps other companies in the search for usable litter.

“It’s not just for Dell’s use,” Campbell said, “but we’d like to be able to see others participate, as well.”

The global search for an ocean plastics supply chain starts with maps and Google Earth, which provided the satellite images researchers used to identify promising plastic pollution sites in Haiti. Then, two expeditions in 2016 to Port-au-Prince allowed staff to take photos and document the plastic accumulation sites.

“These photographs were then manually compared to Google Earth satellite imagery to confirm the Google Earth tool could be used to identify these trash ‘hot spots,’” according to the white paper.

It was all part of a summer 2016 feasibility study that helped Dell understand how plastics accumulate on land and in water and what kind of volumes and contamination to expect.

“We really tried to take a measured and thoughtful approach to how we developed the supply chain,” Campbell said.

Haiti was selected because of its relative proximity to Dell’s North American offices and the fact a rudimentary plastics collection infrastructure already exists there.

In its research, Dell learned intercepting plastics on land or in coastal waterways was the best way to protect the environment while making the supply chain commercially viable. The economics of scooping floating plastics out of the mid-ocean just wasn’t there. To do so would be extraordinarily difficult to acquire the desired plastics “at a cost structure that makes any kind of sense,” Campbell said. By that point, they would have also undergone micro-fracturing and excessive degradation.

**Making a tray**

In Europe, P&G’s ocean plastics work relies on volunteer beach clean-ups across Europe to provide feedstock and advanced sortation and plastics recycling technologies to clean it up. The infrastructure is less developed (Continued, see Ocean, page 9)
Possibilities in Ocean Plastics [Cont’d]

in Haiti, where pickers collect plastics by hand and sell them to low-tech recycling facilities, which employ manual sorters. Collectors learn from photos of different containers how to differentiate between different types of plastics.

Campbell said he wasn’t able to provide specifics of its suppliers but could speak generally about the process. Dell acquires material from local plastics recycling companies in Haiti. Some of the HDPE containers were cleaned and flaked in Haiti and some were brought to the U.S. for those steps, Campbell said.

Then, plastic is shipped to China, where it is blended with other recovered HDPE and molded into a black tray. The final product is, by weight, 25 percent ocean plastics and 75 percent post-consumer HDPE sourced from established collection programs.

In establishing the ocean plastics recycled content, Dell wanted to use a substantial number—something above single digits, for example—but needed a low enough percentage that it could ensure a continuity of supply, Campbell said.

Unlike with P&G’s project, Dell isn’t using additives to boost the quality of the recovered HDPE.

“We deliberately picked an application where the structural characteristics are important, but I wouldn’t say that they were critical,” Campbell said.

It took a period of months and multiple prototypes to get the final plastic right, he said. A video provides glimpses into the work that went into finding the right formula (Campbell is wearing the green T-shirt in the video). [View here.]

In the end, the 300,000 packaging trays will each be cheaper than the previous non-HDPE trays, Campbell said.

Future growth

The mapping work in Haiti involved an analysis of geographic, economic and population factors to see if the Caribbean country would work as a source of ocean plastics. Researchers used the same techniques to study Southeast Asia, a major source of ocean plastic pollution. The region is closer to Dell’s packaging production in China, anyway.

“The analysis indicated that, based on the existing ocean plastic supply chain in Haiti, similar conditions exist in India and the Philippines,” according to Dell’s white paper. “Together there are over 100 waste accumulation sites visibly identified among these three countries. These locations should serve as the first-tier targets for developing a land-based ocean plastics supply chain.”

Specifically, the top viable plastics concentrations in Asia were located in Chennai, India, and Manila, the Philippines. Smaller plastic debris locations were identified in China, Indonesia and Vietnam.

This summer, Dell officials will visit locations in Asia to get a better sense of plastic litter availability there, as it looks to scale up. The successor to the XPS 13 2-in-1 notebook is already slated to use the ocean plastics trays, but Dell wants to expand its use of ocean plastics further.

“The intention for us was never to have just one product,” he said. “There is really a major effort for us to look at other applications for other products within the Dell portfolio.”

Going forward, the company is also looking to incorporate different resins found on coastlines and in waterways. The company only chose to start with HDPE because it has experience working with the resin, and the plastic has good characteristics and properties, Campbell said.

Using their kids as sounding boards, Dell officials learned the public, especially younger people, has a personal connection with the ocean plastics problem, and recycling the material elicits great interest.

“I would urge your readers that if they see an opportunity to use ocean plastic, now is a great time to get involved with it,” Campbell said. “This portion of the industry is really starting to form, and that’s really good to see.”


“This portion of the industry is really starting to form, and that’s really good to see.”
Marine Debris: Our Next Wave in Tackling Marine Debris

By Susan Ruffo, Ocean Conservancy

Trash and plastic waste is unfortunately everywhere in our ocean. From our coasts to the Arctic, to the deepest part of the ocean, marine debris is a growing, global problem. Without concerted efforts to combat marine debris now, the volume of plastic waste entering our ocean will only grow.

Roughly 8 million metric tons of plastic waste enter our ocean each year. Most of that is trash that is never collected, but instead is thrown into city streets or rural areas, or even directly into our rivers and seas. Clearly, the lack of effective waste management is one of the greatest challenges we face in tackling this global issue. Our research in 2015 revealed that if key countries in Asia Pacific improve their waste management, we could halve the flow of plastic into our ocean by 2025. Good waste management—including effectively picking up and sorting trash—is also essential for a future in which waste can be recovered and repurposed. Effective waste management can also deliver public health, economic development and climate benefits. But, what can we do to ensure this becomes reality?

Ocean Conservancy has been working with partners around the world to identify the barriers to effective waste management, including financing, and to provide a roadmap for how businesses, governments and nonprofits can come together around this issue as a key piece of solving the ocean plastic problem. When paired with efforts to reduce and reuse waste, these efforts will allow us to take a great leap forward in protecting the ocean, the climate and public health.

An initiative of the Trash Free Seas Alliance®, The Next Wave: Investment Strategies for Plastic Free Seas [click here] presents thoughtful, thorough analysis designed to lay out options to more easily attract investment to effective waste management in key regions. The report outlines the challenges associated with financing effective waste management and identifies options to attract new investments for it in developing Asia-Pacific economies. Building off the work in Stemming the Tide, [click here] our hope is that The Next Wave will help to change the way municipal waste systems can be designed to attract more public, entrepreneurial and private sector interest.

Connecting funds to waste management projects in areas where the need is greatest has proven to be a great challenge. With a multi-sector approach, enduring and innovative waste management systems can be realized, and these systems will help stem the tide of plastic waste into our ocean while also improving the health and prosperity of local communities.

No one organization or sector can solve this problem alone, but with combined efforts and renewed thinking, we can remove a key barrier to preventing marine debris.

Please join us on this next wave forward, and together we’ll move even closer to a future of trash free seas.

MARINE DEBRIS:
P&G UNVEILS FIRST RECYCLABLE SHAMPOO BOTTLE MADE WITH ‘BEACH PLASTIC’

BY ANNE MARIE MOHAN, PACKAGING WORLD

The Procter & Gamble Company has announced that its Head & Shoulders (H&S) shampoo brand will soon use the world’s first recyclable shampoo bottle made from up to 25% recycled ‘beach plastic.’ In partnership with upcycler TerraCycle and recycling and waste recovery company SUEZ, this innovation will come to France this summer as a limited-edition H&S bottle available to consumers in Carrefour, one of the world’s leading retailers.

According to P&G, this will be the world’s largest production run of recyclable bottles made with post-consumer recycled beach plastic, and a first major step in establishing a unique supply chain that involves the support of thousands of volunteers and hundreds of NGOs collecting plastic waste found on beaches.

“We felt that the leading shampoo brand in sales should lead in sustainability innovation and know that when we do this, it encourages the entire industry to do the same,” says Lisa Jennings, Vice President, Head & Shoulders and Global Hair Care Sustainability Leader, Procter & Gamble. “We’ve been fortunate to work with such great partners in TerraCycle and SUEZ to make this vision a reality.”

Additionally, P&G announced that in Europe by the end of 2018, more than half a billion bottles per year will include up to 25% PCR plastic. This represents more than 90% of all the hair-care bottles sold in Europe across P&G’s hair-care portfolio of flag-ship brands like Pantene and H&S.

The project will require a supply of 2,600 tons of recycled plastic every year—the same weight as eight fully loaded Boeing 747 jumbo jets. P&G says the announcement of the new H&S bottle is an important step in the company’s journey to meet their Corporate 2020 goal of doubling the tonnage of PCR plastic used in packaging.

According to the Ellen MacArthur Foundation, 95% of the value of plastic packaging material, worth $80 to $120 billion annually, is lost to the economy, and on the current track, there could be more plastics than fish in the ocean (by weight) by 2050 (The Ellen MacArthur Foundation, The New Plastics Economy: Rethinking the future of Plastics [2016]).

“At P&G, we believe that actions speak louder than words. The increased use of PCR plastic across our hair-care portfolio of brands demonstrates our continued commitment to driving real change,” says Virginie Helias, Vice President of Global Sustainability, P&G. “The Head & Shoulders recyclable shampoo bottle made with beach plastic is a world’s first in the hair-care category. Increasing the use of recycled plastic in the packaging of our flagship brands, like Pantene and Head & Shoulders, makes it easier for consumers to choose more sustainable products, without any tradeoffs. So while we’re proud of what we’ve done and what we’re doing, we know there is much more work ahead.”

Notes Tom Szaky, CEO of TerraCycle, “This partnership represents an important step for TerraCycle. We are proud to be working with one of the world’s largest brands to create a breakthrough product. Creating the world’s first recyclable shampoo bottle with beach plastics is a start of an important journey. With the circular economy gaining more traction, we hope that other global brands will work with green suppliers and use their influence to drive change for the benefit of the environment.”

Jean-Marc Boursier, Group Senior Executive VP in charge of Recycling & Recovery Europe for SUEZ, says, “We hope that other organizations will continue to partner with different providers in order to deliver major environmental changes in this industry and hopefully across other industries too. With nine dedicated plastic facilities across Europe, Suez is already producing 170,000 tons of high-quality recycled polymers.”


THE PROJECT WILL REQUIRE A SUPPLY OF 2,600 TONS OF RECYCLED PLASTIC EVERY YEAR.
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California regulators are signaling they may want a mandatory program covering end-of-life management for packaging, and a workshop on March 22 will explore what the details could look like.

Scott Smithline, director of the California Department of Resources Recovery and Recycling (CalRecycle), last fall directed his staff to develop a “mandatory packaging policy model.” Department staff identified extended producer responsibility (EPR), landfill bans on recyclable materials and minimum-recycled-content requirements as policies to consider.

No U.S. state has approved a mandatory extended producer responsibility approach to packaging, although it has been considered in Rhode Island and Connecticut. Canadian provinces, including British Columbia, use EPR laws to finance and manage their recycling systems.

This meeting is part of what CalRecycle described as “an extensive public consultation process to gather feedback during development of the model.”

CalRecycle sees a mandatory diversion approach to packaging as important to helping California achieve its goal of a 75 percent recycling rate by 2020.

Years in the making
In 2013, CalRecycle identified the diversion of packaging away from landfill as a key strategy to reaching its 75 percent goal. Consumers in California generate an estimated eight million tons of packaging each year, constituting one quarter of the MSW stream.

“That 75 percent goal will never be met without tackling this part of the waste stream,” CalRecycle spokesman Lance Klug told Resource Recycling.

CalRecycle asked for stakeholder input due to the complexity of packaging and recyclability. Its first workshop was held in November 2014 to get feedback from packaging companies, trade associations and other stakeholders. That discussion showed that most industry representatives preferred an approach that would “focus on partnerships and voluntary efforts instead of mandatory ones,” according to CalRecycle.

So the department in early January 2016 convened what was termed the “Manufacturers Challenge,” featuring a dozen trade associations and manufacturers. Their goal was to present ideas to voluntarily meet the California goal, avoiding state mandates.

Mandated versus voluntary
Later in the year, CalRecycle staff indicated they felt the meeting did not achieve the results the department was looking for. In a September 2016 request for approval, CalRecycle staff said the industry representatives did not propose new actions they would take to help California achieve its goals and, instead, used the Manufacturers Challenge session to highlight their existing national activities to reduce packaging waste.

CalRecycle’s takeaway from the manufacturers’ discussion was that the department should drop consideration of a voluntary manufacturer approach to meet state goals.

The state should instead develop a “mandatory, comprehensive, state-wide packaging program” to address packaging waste, while further exploring some of the voluntary manufacturer proposals that could be complementary to the mandatory program, the memo stated.

Meeting specifics
The March 22 meeting agenda indicates government representatives in attendance will include Smithline; Howard Levenson, the deputy director of CalRecycle’s materials management and local assistance division; Cynthia Dunn, CalRecycle’s supervising senior environmental scientist; and Shannon Davis, representing the U.S. EPA.

The workshop will include two panel discussions. The first, covering “existing policy models,” includes representatives from Environmental Packaging International, Multi Materials British (Continued, see EPR, page 14)
Columbia, Stopwaste, Greenpak and Extended Producer Responsibility Alliance. Organizers were still looking for a company utilizing recycled content in its packaging when the agenda was compiled.

A second discussion titled “California Considerations” includes Republic Services, Merlin Plastics, Californians Against Waste, a San Francisco city official, the California Product Stewardship Council, the Ocean Protection Council, Graphic Packaging Inc., and a retailer and brand owner that had not been decided on when the agenda was compiled.

The meeting will also include audience question-and-answer sessions and a facilitated discussion between all panelists and attendees.

Those who can’t attend the event in person can listen in on the workshop via an online webcast. The workshop runs from 9:30 a.m. to 4 p.m. PST on March 22.

**One group’s take**

At the Association of Plastic Recyclers (APR) March meeting last week, APR Executive Director Steve Alexander said the potential for packaging EPR is the “elephant in the room” in California’s discussions.

He said there are too many variables for APR to take a position just yet, but he said his reading is CalRecycle is serious about moving forward with some sort of packaging program, even if it makes some groups unhappy.

Bruce Magnani, who lobbies on behalf of APR, described the upcoming workshop as “CalRecycle’s first shot across the bow that they’re really serious about stewardship.”

He said it’s unlikely the program would be established in one legislative year and predicted its development would continue into 2018.

California regulators are threatening to bring the hammer down on a carpet stewardship group, saying it has failed for years to grow carpet recycling.

The California Department of Resources Recycling and Recovery (CalRecycle) says that for the past three years it has warned Carpet America Recovery Effort (CARE) that its efforts were falling short of legal requirements. It is now pursuing enforcement, which could include fines as high as $10,000 a day.

“Enforcement action was determined to be the appropriate course of action at this time, given CARE’s failure to correct previous findings of noncompliance, and a recycling rate that has not shown improvement under its program stewardship,” CalRecycle spokesman Mark Oldfield told Plastics Recycling Update.

Recycling carpet face fiber, the upper part consumers regularly touch, can yield post-consumer nylon, nylon 6,6, PET/PTT and PP. In some cases, the plastics can even be recycled back into new carpet.

In California, the carpet recycling rate has plateaued at around 10 percent. CARE’s goal for 2020 is 24 percent.

In addition to pursuing possible penalties, CalRecycle rejected CARE’s proposed 2017-21 carpet collection and recycling plan [click here], arguing that it fails to comply with state law.

Bob Peoples, executive director of CARE, declined to comment to Plastics Recycling Update. In a 2017 plan submittal statement to CalRecycle, however, he wrote that the framework meets the legal requirements for approval. He stated those requirements dictate that the plan won’t lower diversion and recycling rates and that it won’t create any unfair advantages in the marketplace.

California is the only state with an extended producer responsibility (EPR) law in place for carpet. CARE, a Dalton, Ga.-based group, works on behalf of manufacturers of carpet sold in California to cover the requirements of the law. It collects fees paid by consumers when they purchase new carpet and provides subsidies to the recycling industry.

CARE also runs a voluntary program providing subsidies to carpet sorting companies in other parts of the country—funds from the program are not available to entities handling material from California.

Tough time for recycling
CalRecycle’s Waste Evaluation and Enforcement Branch (WEEB) during a Dec. 20 public meeting unveiled the decision to pursue enforcement. During that meeting, staff from a different CalRecycle branch presented a request to reject CARE’s 2017 plan. CalRecycle Director Scott Smithline agreed and rejected it.

According to a CalRecycle enforcement evaluation, regulators made several findings to justify their enforcement action: a lack of continuous and meaningful improvement in carpet recycling; significant gaps in collection opportunities around the state; ineffective marketing, education and outreach efforts; and a failure to respond to depressed markets for recovered carpet.

In its 2017 plan, CARE cited difficult market conditions as a challenge that is holding back growth in carpet recycling.

“The past five years have provided key lessons: Recycle markets are not only dynamic, but often unpredictable and, coupled with global supply chains, outside the control of CARE, and thus difficult to manage,” according to the plan.

Low plastics values have hurt plastics recycling companies, including those recycling carpet. Carpet is made up of different materials that are bound together with longevity in mind. Separating them for recycling is already difficult to do cost effectively.

Shaw Industries, a global carpet manufacturer, recently announced it was halting commercial-scale (Continued, see Carpet, page 16)
recycling at its $20 million facility in Ringgold, Ga. Shaw wasn’t able to make the recycling of polyesters and nylons from post-consumer carpets technically viable on a commercial scale, according to floordaily.net.

CARE’s rejected California plan emphasized that an out-of-state recycling infrastructure is essential if carpet recycling in California is to be viable.

Subsidizing a nascent industry
In a 17-page memo, CalRecycle cited the difficult market conditions when they accused CARE of continuing what they saw as inadequate subsidy programs.

“The 2017 plan does not describe a process for achieving continuous meaningful improvement beyond a general discussion of existing subsidies, which have proven insufficient to date,” according to the memo. “In fact, CARE proposes to scale back subsidy guarantees to six months from the current one-year period; this seems counterintuitive for supporting a nascent California carpet recycling industry struggling to stay in business.”

The subsidy guarantees give recycling companies predictability in how much they’ll be paid so they can make needed investments. In its plan, CARE said the change to six months was necessary to “ensure liquidity of the funds” and allow money to be refocused to other subsidies in response to program goals and market changes.

“Given the significant level of subsidies currently being offered by the program, it is believed that this change will not greatly affect stakeholders’ willingness to invest in opportunities presented by the program,” according to CARE’s 2017 plan.

The fee consumers pay when they buy new carpet increased on Jan. 1 from 20 cents to 25 cents per square yard. That fee hike will boost revenue to CARE’s California recycling program. CARE also budgeted an increase in spending for “subsidy payouts” this year. Specifically, its 2017 plan proposes providing $19.7 million to carpet collectors, sorters, processors and recycled-content manufacturers, up 12.5 percent from last year.

CARE currently provides subsidies to manufacturers using post-consumer PET/PTT and PP from carpet, but it doesn’t apply to nylon. CalRecycle suggested extending the subsidies to post-consumer nylon carpet, which has seen a significant drop in demand.

Details enforcement options
In the past, CalRecycle has deferred enforcement action to “provide CARE with the time and space necessary to build the foundation for recycling success,” Oldfield said.

CalRecycle warned CARE in September 2013, September 2014 and September 2015 that its plans were not compliant and needed changes, according to the enforcement evaluation. CalRecycle has legal authority to issue fines up of up to $10,000 per day, with the amount depending on various factors, according to the enforcement evaluation. If the agency decides to issue fines, its legal office will draw up an accusation document and file it with the Office of Administrative Hearings. CARE has 15 days to request a hearing. Hearings are typically scheduled about nine months out, Oldfield said.

As another option, CalRecycle could issue a compliance order spelling out milestones and time-frames CARE needs to meet.

In rejecting the plan, Smithline gave CARE up to 120 days to work with the agency to develop an amended plan and receive CalRecycle approval. He instructed agency staff to delay any enforcement action connected to the 2017 plan during that time.

SUSTAINABILITY:
IT’S TIME FOR BIOPLASTICS TO BE PLASTICS
BY ADAM GENDELL, SUSTAINABLE PACKAGING

“I wish people would stop calling PLA* a bioplastic...” said Steve Davies, director of public affairs and communications at Nature-Works during a recent meeting of the Sustainable Packaging Coalition’s Industry Leadership Committee on Bioplastics. “...and start thinking of it as one more functional material—dare I say it...another plastic.”

These words were spoken by a representative from one of the largest producers of bioplastics in the world—in fact, one of the chief pioneers in the field and the reason the word “bioplastics” is as ubiquitous as it is today. Steve’s point is this: When those of us in the packaging community hear the word plastic, we think of a spectrum of polymers with different performance characteristics, costs, sustainability attributes, advantages and disadvantages. But the word bioplastic often carries a narrow connotation of a compostable, plant-based plastic with limited functionality and prohibitive cost.

It’s time for that to change.

The world of bioplastics has exploded, and there is an amazing breadth of materials that can be classified as bioplastics. Part of the reason, arguably, is the far-reaching definition of a bioplastic. The most commonly used definition, popularized by European Bioplastics, is that a bioplastic is biobased, biodegradable or both. To unpack this, that means that a bioplastic can be inherently non-biodegradable. It means that a bioplastic can contain 0% bio-based materials. A bioplastic may be 100% fossil-based. It can be any combination of being partially bio-based, fully bio-based, non-bio-based, biodegradable, compostable or non-biodegradable, so long as it is not both non-bio-based and non-biodegradable.

There are four basic permutations of these characteristics, and bioplastics encompass three of them: see chart below.

The definition of bioplastics is a matter of semantics, but the semantics are removed when the family of bioplastics becomes enveloped in our definition of plastics. There are a slew of terms used when describing plastics: “barrier plastic,” “formable plastic,” “heat-resistant plastic.” By including the terms “bio-based plastic,” “biodegradable plastic” and “compostable plastic,” we can articulate more clearly what properties are relevant to our conversations.

For those companies interested in decoupling plastics from fossil-based feedstocks, as is encouraged in the Ellen MacArthur Foundation’s New Plastics Economy initiative, “bio-plastics” may or may not be the answer. “Bio-based plastics” are the answer—and it’s also important to recognize the importance of partially bio-based plastics, as the world of bio-based intermediates is ballooning and partially bio-based plastics can keep that innovation marching forward.

Here’s another point to consider: Amazing work is being done to pursue plastics made from sequestered atmospheric greenhouse gasses. This technology carries the promise of decoupling (Continued, see Bioplastic, page 18)
plastic from its conventional fossil-fuel feedstock, but it doesn’t fit the common definition of a bioplastic. Semantics strike again, and to advance the use of novel feedstocks, we can’t limit ourselves to “bioplastics.”

Other companies are interested in compostable plastics. For packaging likely to end up with food waste, compostability is especially enticing. It offers an alternative to recycling, which is phobic of contamination, and diverts food waste from the landfill by delivering it to the industrial composter who can take advantage of its residual value.

For this pursuit, “bioplastics” may or may not be the answer. One step further, “biodegradable plastics” may or may not be the answer either, since not all biodegradable plastics are truly compostable. “Compostable plastics” are the answer, and the matter of the feedstock being bio-based, partially bio-based or fossil-based, is not directly relevant to the job the plastic is being hired to do.

So rather than the binary distinction between plastics and bioplastics, let’s simply expand the list of functional characteristics on the polymer specification sheet. Buyers of plastics should continue to choose resins for their combination of functional material characteristics and cost performance.

But let’s marry the family of PLA*, PEF*, bio-based PE*, modified starch, PHA*, and many others with the family of PET*, fossil-based PE*, PP*, PS* and everything between to recognize that “bioplastics” are equally—if not more—diverse than the conventional family of plastics, and the functional characteristics related to feedstock and end-of-life compatibility are neither mutually exclusive nor limited to an outdated understanding of uniquely progressive materials in our growing world of packaging.

SUSTAINABILITY: TARGET ANNOUNCES NEW CHEMICAL STRATEGY

BY JENNIFER SILBERMAN, CHIEF SUSTAINABILITY OFFICER

At Target, our guests come first—they’re at the center of everything we do. Guests love shopping our stores and site for all their favorite things, and we know they care a lot about what’s in those products. They trust the bullseye to provide better choices for their families. Target takes their trust seriously, and continues to proudly deliver on that promise year after year through our long history of investing in the social and environmental sustainability of our communities.

Over the years, we’ve introduced new, better-for-you product options like our Simply Balanced grocery brand. We’ve brought partners together in the name of finding smarter solutions—even co-hosting a day-long summit with Walmart and Forum for the Future, where 50 beauty and personal care companies and organizations met to discuss product sustainability. And we’ve set high standards for product quality and safety, like our Sustainable Product Index (SPI) created in 2013, which helps us assess products for healthier living, environmental impact, packaging and sourcing practices.

And now, to build on that work, we’re announcing a new chemical strategy that addresses our entire value chain, operations and every product we sell—a first in the retail industry. And with it, a new policy: Target is committed to driving transparency, proactive chemical management and innovation across all of our owned and national brand consumer products, and operations.

TARGET’S CHEMICAL POLICY

TRANSPARENCY

We will strive for full visibility to chemicals contained in or used to make the products we sell and use in our operations.

CHEMICAL MANAGEMENT

We will work with business partners to implement policies, practices and tools that facilitate the management of chemicals throughout our supply chain and across our operations.

INNOVATION

We recognize that safer alternatives may not exist today for some chemicals; therefore we will actively pursue and promote new approaches to chemicals development and the commercialization of safer alternatives.

“Our chemical strategy will be one of the most comprehensive in the U.S. retail industry, including all Target-owned and national brand products and operations, not just formulated products,” says Jennifer Silberman, chief sustainability officer, Target. “It’s ambitious, but using our size, scale and expertise, we think we’ll be able to make significant progress. And we hope our robust approach will accelerate similar efforts across the industry. Ultimately, we want to bring all stakeholders together to innovate and champion a consistent, industry-wide approach to greener chemistry.”

Along with the policy, we’re introducing our first set of goals—check them out below. They’re aimed at addressing unwanted chemicals with the biggest potential health impact, factoring in their prevalence within our products. We’re also prioritizing the areas guests tell us are most important to them—such as products that go on, in and around their body.

TARGET’S CHEMICAL GOALS

TRANSPARENCY

Our Goal: Achieve transparency to all ingredients, including generics such as fragrance, in beauty, baby care, personal care and household cleaning formulated products by 2020.

CHEMICAL MANAGEMENT

Our Goals:
- Improve beauty, baby care, personal care and household cleaning product categories by formulating without phthalates, propylparaben, butyl-paraben, formaldehyde, formaldehyde donors, or NPEs by 2020.
- Improve textile products by removing added Perfluorinated Chemicals (PFCs) from products by 2022.
- Improve textile products by removing added flame retardants (Continued, see Target, page 20)
that are potential carcinogens or pose harm to the guest, workers or communities by 2022.

**INNOVATION**

Our Goal: Invest up to $5 million in green chemistry innovation by 2022.

**It takes teamwork**

To get things started, we’re teaming up with our vendors, supply chain partners, NGOs and other organizations across the industry to identify unwanted substances in products and operations, understand how they impact health, and work to develop safer alternatives.

“Making informed choices should be simple for guests,” says Dawn Block, senior vice president, essentials and beauty, Target. “This framework is designed to take the complications out of finding better-for-you product options. We’re looking forward to working with our vendors on solutions that will benefit us all.”

One example where we’ve already made progress? Our partnership with household brand Seventh Generation. “This announcement is a huge win for consumer transparency and we’re thrilled that Target is taking this step,” says John Replogle, CEO, Seventh Generation. “It’s a forward-thinking policy like this that will drive industry change, ensuring that the health of our planet and its people are never compromised for profit.”

**How we’ll do it**

The new chemical strategy is an integral part of our sustainability commitments and overarching responsible sourcing aspirations. It will build on a number of our existing tools and efforts, like the SPI, and sometimes require us to develop new tools to help meet the needs.

In some cases, the work will mean innovating to find safer chemical alternatives. We know this is an enormous task with no easy answers, so Target plans to invest resources and expertise, especially where no viable substitutions currently exist. For example, our work during the GC3 Preservatives Challenge to drive innovation in the preservatives category has helped to advance greener chemistry in beauty and personal care products.

“Part of knowing what’s in products is understanding where they come from and how they’re made,” says Irene Quarshie, vice president, quality & compliance, Target Sourcing Services. “It’s a forward-thinking policy like this that will drive industry change, ensuring that the health of our planet and its people are never compromised for profit.”

**Measuring our progress**

So how will we know we’re making headway? We’ll monitor our progress, starting February 2017, and report on it each year in our Corporate Social Responsibility Report. And because the retail landscape is always changing, we’ll continue to iterate, update and set new goals as needed, expanding the categories we cover and chemicals addressed.

“We’re excited to kick off this long-term effort, understanding that this is a journey, and it takes everyone working together to truly make a difference,” Jennifer says. “We look forward to working with our partners on further reducing the presence of unwanted substances in the homes and workplaces of millions of guests, and helping to enhance their health and well-being.”

SUSTAINABILITY:  
‘GREENWASHING’ COSTING WALMART $1 MILLION  
BY JESSICA LYONS HARDCASTLE, ENVIRONMENTAL LEADER

Walmart has agreed to pay $1 million to settle greenwashing claims that allege the nation’s largest retailer sold plastic products that were misleadingly labeled “biodegradable” or “compostable” in violation of California law.

“We are pleased to resolve this matter with the California district attorneys and are appreciative of them as they have worked with us on this issue,” a Walmart spokesperson told Environmental Leader in an email. “Sustainability is a priority for us, and we have been recognized as a retail leader in this space. We’re proud of the enhancements we have made to help ensure that the products we sell to California customers are in line with the state’s guidance on biodegradable labeling.”

The sale of plastic products labeled “compostable” is also prohibited—unless the product meets certain scientific standards that ensure the plastic will break down in municipal compost.

“Unfortunately, Californians concerned with reducing plastic waste in landfills are commonly misled to purchase plastic bags and other plastic products based on marketers’ unsubstantiated claims of biodegradability,” said Alameda county district attorney Nancy O’Malley, “but almost nothing breaks down in a landfill. That’s why the sale of plastic products labeled ‘biodegradable’ is illegal in California and why today’s settlement is a win for both consumers and the environment.”

O’Malley and 22 other California district attorney’s offices brought the case against Walmart. Under the settlement Walmart agreed to pay $875,000 in civil penalties and an additional payment of $50,000 to CalRecycle to fund testing of plastic products marketed to consumers as compostable or degradable. Walmart’s recently purchased subsidiary, Jet.com, will pay an additional $15,000 in civil penalties.

The judgment prohibits Walmart from selling plastic products labeled “biodegradable” or with other terms implying the product will break down in a landfill or other environment. It also prohibits Walmart from selling plastic products labeled “compostable” unless a scientific certification supports the claim.

California’s action against Walmart follows the Federal Trade Commission’s ongoing crackdown on false and misleading environmental claims, including five enforcement actions that specifically address biodegradable plastic claims. ●

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THE VOICE OF THE PLASTICS INDUSTRY IN THE WEST

RECYCLING: ONLY 14% OF PLASTICS ARE RECYCLED—CAN TECH INNOVATION TACKLE THE REST?

BY MARY CATHERINE O’CONNOR, THE GUARDIAN

The world recycles just 14% of the plastic packaging it uses. Even worse: 8m tons of plastic, much of it packaging, ends up in the oceans each year, where sea life and birds die from eating it or getting entangled in it. Some of the plastics will also bind with industrial chemicals that have polluted oceans for decades, raising concerns that toxins make their way into our food chain.

Recycling the remaining 86% of used plastics could create $80–$120 billion in revenues, says a recent report by the Ellen MacArthur Foundation. But those revenues will never be fully achieved without designing new ways to breakdown and reuse 30% (by weight) of the plastic packaging that isn’t recycled because the material is contaminated or too small for easy collection, has very low economic value or contains multiple materials that cannot be easily separated. Think of candy wrappers, take-out containers, single-serving coffee capsules and foil-lined boxes for soup and soymilk.

Large companies have developed plant-based alternatives to conventional, petroleum-based plastic so that they can break down without contaminating the soil and water. The market opportunity has attracted small, young companies that focus on developing recycling technology to tackle that troublesome 30% of plastic packaging that is headed to landfills at best, and, at worst, to our rivers, lakes and oceans.

AGYLIX

The target: Polystyrene. It’s commonly made into products such as styrofoam cups, packing peanuts and rigid red picnic cups.

Trouble spot: Used polystyrene foam packaging has long been condensed and “downcycled” into décors such as crown molding or picture frames. Fully recycling used polystyrene back into the same material could reduce demand for oil and cut greenhouse gases even more.

The fix: Founded in 2006, Agylix’s technology breaks the polymer down to molecules, which it sells in liquid form to refiners that will bind the molecules to form polyethylene, according to CEO Ross Patten. Agylix’s technology can go further and convert polystyrene back to crude oil. It did that until last year, when low oil prices made it unfeasible to continue.

The challenge: Agylix, based outside Portland, Oregon, may find itself with a decreasing feedstock. There are legislative and grassroots campaigns in the US aimed at eliminating polystyrene packaging. Not only is it prevalent in oceans, but some public health advocates say it could cause cancer. Maryland is considering a ban on polystyrene foam packaging, and shareholder groups are pressuring Walmart, Target and Amazon to stop using the material for shipping.

BIOSCELLECTION

The target: Low-density polyethylene (LDPE). It’s everywhere: grocery bags, produce bags and Ziploc bags. It’s also not accepted in curbside recycling programs. Some grocery stores do collect and send it to companies that turn it into plastic lumber and other products.

Trouble spot: Consumers tend to put LDPE in their recycling bins anyway, even though recyclers don’t want it. The material has become the bane of many recycling facility managers because they have no market into which to sell it, and in turn have not instituted systems for sorting and collecting the film. As a result, it tends to gum up sorting and conveyance machinery.

The fix: Jeanny Yao and Miranda Wang, the entrepreneurs behind a two-year-old San Jose, California, startup called BioCollection, are using genetic engineering to create a process that turns LDPE into chemical compounds for use in a variety of ways, including emulsifiers or cleansers in cosmetics to textile manufacturing. Their process involves feeding (Continued, see Plant, page 24)
the plastic to a machine roughly the size of a cargo container and using a chemical treatment to break down the LDPE into small carbon-based molecules into powder form.

The powder will go into a bioreactor with bacteria that have been genetically engineered to eat the powder and secrete a lipid that's used as an emulsifier or cleanser. It can replace compounds that currently are made from petrochemicals or palm oil, which typically comes from farms that have caused large-scale deforestation and habitat loss in Malaysia and Indonesia. That has prompted many manufacturers, including clothing company Patagonia, to look for new sources.

“We are aiming to make sustainable biological products using the most problematic, unrecyclable mixed plastic waste as the starting material,” says Wang.

The challenge: The startup’s biggest hurdle will be weeding out both unwanted chemical additives in the polymers as well as random substances from trash collection that become attached to LDPE, says Susan Selke, who directs Michigan State University’s School of Packaging. Yao says she’s mindful of the issue and is working on creating bacteria that can eat or tolerate the contaminants.

**CADEL DEINKING**

The target: Low-density polyethylene (LDPE).

Trouble spot: Color – the product information and logos printed on plastic packaging is what has prevented LDPE from being recycled back into film which can be used for the same applications.

The fix: Cadel Deinking, which spun out of Spain’s University of Alicante three years ago, has developed a process that removes the ink by soaking the plastic in a solvent-free chemical bath. Cadel has licensed the technology to a Brazilian packaging provider that can produce recycled packaging, a process that can be cheaper than using petrochemicals or palm oil to make the plastics, according to Adriana Pineda, Cadel's business development manager. (The same process also works with other plastics.)

The challenge: While Cadel can remove ink printed onto plastic, it can’t remove pigments injected into it, such as a colored cap on a plastic bottle. As a result, the company can only take white or clear plastic bag or shrink wrap with printed logos.

Cadel also only buys used plastic from businesses and factories instead of homes, where the plastic is more likely to get mixed in with unwanted materials. But the company has improved its machines that separate the plastic from contaminants, so it will begin testing its technology on post-consumer waste this year.

**SAPERATEC**

The target: Mixed-material packaging.

Trouble spot: Mixed-material packaging is made up of tightly laminated layers of plastic, cardboard and aluminum foil. Think of Capri Sun drink pouches or cardboard boxes for soup in the grocery aisle. This composition of materials can help extend the shelf life of foods, sometimes without requiring refrigeration, and is lighter than other packaging options such as glass or metal. However, separating materials for recycling is difficult and expensive to do, and few recycling programs will accept mixed-material packaging.

The fix: Saperatec, a six-year-old German company, has developed a process to separate the adhesive bonds of materials by shredding and putting them through a chemical bath. The technology will then isolate and cull the materials—aluminum, LDPE and polyester for recycling. Currently, Saperatec does not recycle paper used in these mixed materials.

Saperatec has been operating a pilot plant since 2014 and aims to have its first large scale recycling center open in 2018, according to Stefan Pöschel, the company’s head of sales and business development. It plans to recycle 18,000 metric tons of material each year.

The challenge: Saperatec can’t sell to the food and drink industry because of health regulations that prohibit recycled materials for food-contact packaging. Its current plant in Germany only takes used packaging from businesses because trash from these sources aren’t usually mixed with many types of garbage. It’s working on a process that can separate unwanted trash so it can take mixed packaging materials from city recycling facilities.

Working with the ever-changing stream of packaging innovations is a constant challenge for the plastics recycling industry.

At the Association of Plastic Recyclers (APR), we believe functional, attractive and economical plastic products can also be fully compatible with material recovery and plastics reclamation systems. Nonetheless, many new forms of packaging act as contaminants to the recycling stream. And these materials often replace packaging that was fully recyclable.

To help avoid such packaging pitfalls, APR has embarked on several programs aimed at working with package designers and engineers to provide guidelines for innovations that are compatible with recycling. Below, we’ll lay out the various tools and approaches we are using to ensure a plastics recycling stream that is more profitable than problematic.

Clear connection with brand owners
First and foremost is the APR Design Guide. The document provides an outline detailing how to construct a package that is recyclable.

“At the end of the day, recyclers have to deal with contamination in the recycling stream,” said Scott Saunders, chairman of APR and general manager of KW Plastics Recycling in Troy, Ala. “The Design Guide helps us work with brands so they recognize the recyclability of the packaging they are putting in the market.”

Furthermore, APR has introduced a multi-step program to provide recyclability guidance to the marketplace. The Brand Owner Training Program, based on the APR Design Guide, provides individual companies with a customized review of their packaging, the impact on recycling and suggested modifications, if necessary. The ultimate goal of the program is to have the potential recyclability of a container introduced at the beginning of the design stage.

However, the fact remains there are many products already in the marketplace that are not recyclable. Although the APR Design Guide outlines the changes that should be made to those problem areas, the long-term goal is to ensure that the concept of recyclability is at the forefront of the thought process when designing a container or innovating an existing one.

In addition to the Training program, APR has also formed a Consumer Brand Company group within the organization to facilitate direct dialogue from both sides of the equation. “We are very aware of the challenges of retrofitting a package already in the marketplace,” commented John Standish, APR’s technical director. “The brand group not only serves as a forum to help all sides understand the challenges associated with package design and recyclability, but also sets the stage for identifying a solutions-oriented approach.”

Spelling out specifics
To encourage design for recyclability APR has identified a list of priority areas that should be considered by packaging engineers and designers. This list helps to cut through some of the higher level talking points and clearly indicate which packaging choices are most recycling-friendly.

For PET containers, for example, APR recommends specific pressure sensitive labels and shrink sleeve labels, and we back the use of new crystallizable PET resins for extrusion blow molding.

Meanwhile, APR discourages the use of paper labels on HDPE or PP packaging as well as the use of metal closures and PVC for labels or attachments.

We also urge packaging companies to avoid additives and multilayer containers that affect the color of PET as well as fillers that cause a polymer to sink in water.

(Continued, see Stream, page 26)
These steps alone would go a long way toward eliminating most of the contamination in packaging that recyclers encounter on a daily basis.

Cleaning up claims
Another area of concern for the plastics recycling industry pertains to unsubstantiated claims of package recyclability. A growing number of products note in marketing they are fully recyclable when in reality they are not. These claims confuse consumers and are problematic for recyclers.

Plastic cans are one of the more recent products being touted as recyclable, but the metal lid causes them to contaminate the recycling stream.

We also need to be thinking about these issues from a global perspective. Consumer brand companies, as well as recyclers, have voiced the need to have one set of standards for the U.S., Europe, and beyond.

While the APR testing protocols are currently utilized in many countries, there are small differences with EU protocols. While minor, any difference requires a separate test, which adds to the cost of introducing an innovation. APR has initiated dialogue with the trade organizations that oversee packaging guidance throughout the EU in order to develop uniform guidance procedures.

“APR is focused on developing supply, enhancing quality, and boosting demand,” commented Saunders. “Consumer brand packaging plays a critical role in all three of those areas. In order to continue the growth of the plastic recycling industry, we need to expand our relationship with brands as they introduce more and more innovation into the marketplace. We want recyclability to be top of mind when designing a package or introducing innovation.”

As part of the Manufacturing USA initiative, today the Energy Department announced its new Reducing Embodied-energy and Decreasing Emissions (REMADE) Institute, which will be headquartered in Rochester, New York, and led by the Sustainable Manufacturing Innovation Alliance. REMADE will leverage up to $70 million in federal funding, subject to appropriations, and will be matched by $70 million in private cost-share commitments from over 100 partners.

The REMADE Institute will focus on driving down the cost of technologies needed to reuse, recycle and remanufacture materials such as metals, fibers, polymers and electronic waste and aims to achieve a 50 percent improvement in overall energy efficiency by 2027. These efficiency measures could save billions in energy costs and improve U.S. economic competitiveness through innovative new manufacturing techniques, small business opportunities, and offer new training and jobs for American workers.

“The REMADE Institute is a key example of how public-private partnerships like Manufacturing USA are critical to advancing America’s low-carbon economy and strengthening manufacturing industries across the country,” said Energy Secretary Ernest Moniz. “This Institute will be an important catalyst to leverage innovation and energy efficient technologies that will reduce harmful emissions while creating jobs and building America’s 21st century economy.”

U.S. manufacturing accounts for nearly 25 percent of the nation’s total annual energy use. The physical products that are created as a result of manufacturing embody most of that energy. The research and deployment of cost-effective technologies that could reduce the energy used in materials production could offer energy savings of up to 1.6 quadrillion BTU annually in the U.S.—more than the electricity, oil and other energy consumed by New Hampshire, Hawaii, Delaware, Rhode Island, Washington, D.C. and Vermont combined.

Extracting raw materials like steel and aluminum for manufacturing is energy intensive as is the manufacturing process used to make products with these materials. By enabling recycling and remanufacturing (rebuilding original products using a combination of reused or recycled parts) technologies, the Institute will dramatically reduce life-cycle energy consumption for products and improve overall manufacturing efficiencies. The focus also includes new ways for information collecting; gathering, identification and sorting of end-of-life and waste materials; separating mixed materials; removal of trace contaminants and robust and cost-effective reprocessing and disposal methods.

REMADE is the fifth Energy Department-led institute in the multiagency network known as Manufacturing USA, also known as the National Network for Manufacturing Innovation. Since it was established four years ago, Manufacturing USA has grown from a single institute to a network of 13 institutes. Led by manufacturing experts renowned in their field, the Manufacturing USA Institutes have attracted over 1,300 companies, universities and nonprofits as members—starting with 65 members and now at more than 1,000.

The institutes continue to attract new business investment to their regions, develop cutting-edge technology and train American workers to apply new skills to our growing manufacturing sector. To date, the federal government’s commitment of more than $920 million has been matched by more than $1.87 billion in non-federal investment. For more information about the REMADE Institute and participating organizations, visit Energy.gov.

The Foodservice Packaging Institute (FPI), Falls Church, Fla., completed a review of literature related to the impact of compostable foodservice packaging at different points in the composting value chain. The study found a growing body of evidence demonstrating that the use of compostable foodservice packaging can increase food scrap diversion and reduce contamination when used in conjunction with known best practices for food scraps collection.

The study [view here], commissioned by FPI’s Paper Recovery Alliance and Plastics Recovery Group, examined how compostable foodservice packaging impacts:

- Composting program participation rates.
- Food scraps diversion rates.
- Contamination of composting feedstocks and finished compost.
- Composting process compared with traditional carbon sources.

“As the use of compostable packaging grows, so too should the opportunities to successfully recover those items,” says Lynn Dyer, president. “When considering whether to accept foodservice packaging, composters may have questions about the impact on their programs, and this study helped to identify resources to answer those questions.”

Key insights from the study include:

This is an emerging field of study. The impact of compostable foodservice packaging on composting program participation, customer behavior and diversion rates is a relatively new area of study, and as such, the availability of relevant sources varies widely by topic area.

A growing body of evidence shows the use of compostable foodservice packaging can lead to an increase of food scrap diversion and a reduction in contamination. Available data suggests that compostable foodservice packaging use, in conjunction with programs such as outreach, education, new infrastructure and desired behavior models, can increase food scrap diversion rates and reduce observed contamination rates.

Coordinated consumer education is key. In order to realize the full benefits of compostable packaging in increasing food scraps diversion and minimizing contamination, coordinated efforts around customer education are essential between manufacturers, operators, consumers, municipalities, haulers and composters.

Data gaps still exist. A crucial identified gap in available research is the extent to which compostable foodservice packaging compares to natural carbon sources typically used during composting. No data was found comparing their ability to balance compost carbon to nitrogen ratios, moisture content, porosity, composting rate, ammonia volatilization and final compost properties.

“This review will help inform our strategies, investments and activities to increase the recovery of compostable cups, take-out containers and utensils used by an increasing number of foodservice outlets,” says Dyer. “Information-sharing and education among manufacturers, foodservice operators, consumers, municipalities, haulers and composters are critical to our collective success.”

RECYCLING: HOW2RECYCLE LABEL CHANGING RECYCLING HABITS

BY HEATHER CALIENDO, PLASTICS TECHNOLOGY

The How2Recycle Label program finished its soft launch in early 2012 and now has more than 60 participating companies and brands and is growing every month.

I finally live in a neighborhood that has a curbside recycling which, to be honest, is such a relief especially given the fact that I'm the recycling beat writer for PT. It felt kind of odd not to recycle at my house when I cover the industry on a consistent basis.

Yet I still found myself having to double check a couple items...Is this material too thin to be recycled? What's the rule again for in-mold labels? Thankfully though I noticed much more packaging comes with the How2Recycle Label, which let's face it—makes it as clear as can be about what can and can't be recycled at the curb.

For a refresher, the How2Recycle label began in 2008, and is a project of the Sustainable Packaging Coalition. The How2Recycle Label program began in 2012 and now has 60-plus companies and brands participating.

How2Recycle was the first recycling labeling system in the U.S. designed for consumers. As you can see with the example below, it is very clear about the recycling instructions.

I recently checked in with Kelly Cramer, senior manager of the Sustainable Packaging Coalition, to get an update on the progress of the label and where is its future is heading.

Retailers and Brand Owners Sign Up

Cramer says that cumulatively, its members represent over 500 brands in the marketplace. Membership in How2Recycle provides a company the ability to use the How2Recycle label on any or all of their brands. So for members like General Mills, they can use the How2Recycle label on a wide array of their brands, like Betty Crocker, Green Giant, Cascadian Farm, Cheerios and Pillsbury. The company's newest members include Gerber, Marcal, Amy's Kitchen, Whirlpool, Riley's Organics, Nestle USA and PepsiCo.

Both major retailers Target and Walmart use the labels through their private label brands, such as Walmart's Equate and Target's Market Pantry. In fact, Cramer says that those retailers have helped raise awareness and curiosity around recycling claims.

"What's unique about private label packaging is that it spans across the entire retail experience," Cramer says. "As consumers are shopping throughout the store, they will see the How2Recycle label on store brand food and beverage products, on personal care products, and beyond. The more prevalent the How2Recycle label becomes, the more consumers will grow to expect it, and notice when it may be missing from packaging."

Walmart also featured the How2Recycle label in its Sustainable Packaging Playbook, which Cramer says has caught the attention of many brands that are eager to embrace a uniform recycling labeling system for packaging, as well as put the program in front of those who haven't given it as much thought at all.

(Continued, see Label, page 30)
“Walmart encouraging others to join How2Recycle builds peer-to-peer confidence in the ease and importance of adopting the label,” she says. “For brands who haven’t previously prioritized transparent recycling labeling for packaging, it sends a powerful and persuasive message to get on board.”

And according to a survey from the company, consumers say that the label helps them recycle more, and more accurately. Fully 83% of the respondents said that the How2Recycle label teaches them something new about how to recycle packaging, and half say that they change their recycling behavior as a direct result of How2Recycle. Of the half that say they don’t change their behavior, the majority of the time it’s because they don’t have access to recycle that specific package or they already knew how to recycle the package.

Teaming with the Association of Plastic Recyclers

The How2Recycle program also works very closely with the Association of Plastic Recyclers (APR) when they determine technical recyclability. “The unparalleled expertise of APR has been critical to building How2Recycle’s precision, so plastic recyclers can be confident that the How2Recycle label reflects an informed and objective recyclability analysis for each package,” Cramer says, “What this means is that the How2Recycle can help distinguish between lookalike packaging. That is packaging that looks exactly the same to the average person, but is actually different in terms of recyclability. In a perfect world, there would be more standardization and consistency across packaging types so that consumers can draw accurate and sweeping conclusions across similar-looking packaging. So the How2Recycle label is able to cut through that chaos, and call packages as they are.”

For example, plastic bottles that feature a metal spring inside a trigger sprayer have a Discard Sprayer instruction on the How2Recycle label. Since metal is detrimental to the plastic recycling stream, How2Recycle wants the consumer to leave it out. In contrast, bottles with all-plastic trigger sprayers have a Re-Attach Sprayer instruction of the How2Recycle label.

“Our member companies told us in a survey in 2016 that being empowered with that information allows them to improve their packaging design,” she says. “So when recyclers are supportive of How2Recycle, they aren’t just supporting an accurate recycling label; they’re also supporting a program that is influencing brands to make more recyclable packaging.

For these reasons, the How2Recycle label provides value to plastic recyclers by reducing contamination and increasing the volume of good material recovered. As the recycling and packaging industries continue to evolve, alignment along all entities in the system around initiatives like the How2Recycle label will help make the future of recycling resilient and prosperous.”

Launched at the World Economic Forum’s Annual Meeting in Davos in January 2017, this new research presents three strategies to increase reuse and recycling of plastic packaging to 70%, from today’s recycling rate of just 14%.

The report provides a clear action plan, endorsed by over 40 industry leaders, for the global plastics industry to design better packaging, increase recycling rates, and introduce new models for making better use of packaging.

Plastics have become an integral part of our global economy. Due to their functional properties and low cost, these versatile materials have seen their production increase twenty-fold over the past half-century. Despite their indisputable benefits, plastics have significant economic and environmental drawbacks. These negative impacts are sources of concern for business and government, who are recognising the need to rethink the global plastic system.

In January 2016, The New Plastics Economy: Rethinking the future of plastics report by the World Economic Forum, Ellen MacArthur Foundation and McKinsey & Co. made transparent for the first time global plastic material flows and their economics. The study found that globally only 14% of plastic packaging is collected for recycling, and by 2050 oceans could contain more plastics than fish (by weight). Providing a vision for a more effective system based on circular economy principles, the report spurred the creation of an ambitious New Plastics Economy initiative, bringing together leading businesses, philanthropists and policymakers to make this vision a reality, and a new report that outlines a set of concrete actions: The New Plastics Economy: Catalysing action [click here].

Launched at the World Economic Forum’s Annual Meeting in Davos in January 2017, this new research sets out three strategies which will lead to the rate of reuse and recycling of 70% of plastic packaging increasing from today’s recycling rate of just 14%:

• Fundamental redesign and innovation is required for small format plastic packaging (sachets, tear-offs, lids, sweet wrappers etc.) that represent 30% of the market by weight and that often escape collection systems, ending up in the environment.

• Reuse could be economically attractive for at least 20% of plastic packaging, for example by replacing single-use plastic bags with re-usable alternatives.

• Recycling represents an important economic opportunity for 50% of plastic packaging if improvements are made both to the design of plastic packaging and to the systems for managing it after use.

Additional Resources
• Read more information on the New Plastics Economy website [click here].
• Read the full news release [click here].
• Download the infographics [click here].
• Read endorsements from industry leaders [click here].

CORE PARTNERS
The New Plastics Economy initiative includes Amcor, The Coca-Cola Company, Danone, MARS, Novamont, Unilever, and Veolia. Wendy Schmidt, through The Eric and Wendy Schmidt Fund for Strategic Innovation, is the Lead Philanthropic Partner of the New Plastics Economy initiative, and Players of People’s Postcode Lottery (GB), the MAVA Foundation and the Oak Foundation are Philanthropic Funders.

RECYCLING:  
ARROWHEAD® SAVES TENS OF THOUSANDS OF TONS OF CARBON DIOXIDE THROUGH RECYCLING  

BY SUSTAINABLE BRANDS  

Arrowhead® Mountain Spring Water announced today that it has dramatically increased the amount of recycled plastic used in its bottle production. Thanks to the high recycling rate of California residents, and with help from its strategic partner CarbonLITE, Arrowhead now ensures that 9 out of 10 of its Arrowhead bottles made in California incorporate 50% post-consumer recycled plastic content.

Arrowhead is proud to have met its ambitious goal to use recycled content in most of its bottle sizes by the end of 2016, and is continuing to invest in additional efforts to support responsible environmental stewardship in California.

Plastic water bottles are commonly made out of material called polyethylene terephthalate (PET). Arrowhead has been an industry leader in the use of recycled materials and began using recycled plastic (or rPET) in its half-liter bottles—its most popular size—four years ago.

The increase in recycled content is part of a larger effort to reduce plastic waste by Nestlé Waters North America, which produces Arrowhead® Mountain Spring Water.

Arrowhead partners with Los Angeles-based CarbonLITE Industries LLC, one of the largest producers of food-grade, post-consumer recycled PET in the world, to provide the rPET material used in its bottles. The recycled materials are collected primarily in California.

Through its partnership with CarbonLITE, Arrowhead has kept a significant amount of PET bottles from ending up in the waste stream. CarbonLITE estimates that, since 2012, these 86 million pounds of recycled plastic have saved 69,660 tons of carbon emissions versus the use of virgin plastic. This is the equivalent of 39,000 round trip flights from New York to Los Angeles or taking 13,349 cars off the road for a year.

“Californians continue to lead the nation in recycling—recovering billions of plastic containers each year. By reusing the PET portion of these materials, Arrowhead is helping to reduce waste and greenhouse gas emissions and set the standard for the industry,” said Leon Farahnik, founder and CEO of CarbonLITE.

(Continued, see Nestle, page 33)
“Sustainability is a top priority for Arrowhead, which is why we use continuously recyclable PET for our bottles, and why we are committed to finding solutions and stimulating demand to reduce plastic waste. A big part of that is changing the source of PET we use to package our beverages,” said Nelson Switzer, Chief Sustainability Officer at NWNA.

“When our rPET bottles get recycled, we begin to close the loop, putting recycled plastic back into production rather than into the trash,” said Dave Thorpe, Supply Chain Director for Arrowhead. “Together with CarbonLITE, our efforts have kept approximately 1.8 billion bottles out of landfills in this state.”

Arrowhead’s recycling efforts help the State of California to meet its climate change commitments, which call for the reduction of Green House Gas emissions to 40 percent of 1990 levels by 2030. Across the country, Nestlé Waters North America has also reduced the amount of plastic used in its half-liter water bottles by more than 60 percent nationwide over the last two decades.

“The key to meeting the climate change commitments in California lies in collective action on energy and resource management,” Switzer observed. “In this spirit, Nestlé Waters is continuing to look for opportunities to partner with others to help close the loop on plastic waste by recovering, recycling and increasing the use of rPET in packaging.”

**RECYCLING:**

**DEQ AWARDS $1.2 MILLION IN MATERIALS MANAGEMENT GRANTS**

**BY JENNIFER FLYNT AND TIM HENKLE, DEQ**

The Oregon Department of Environmental Quality's Materials Management program has awarded over $1.2 million in grant funding to 34 local governments and non-profit organizations for projects to prevent, reuse or recover solid wastes and support local government materials management planning efforts. Funding was made possible through fee increases approved by the state legislature in 2015.

Examples of projects awarded funding include:

- Projects to support building materials reuse programs in Medford, Warrenton, The Dalles, Junction City and Bay City.
- Recycling and composting projects in Sandy, Lake Oswego, Gresham and Lane, Benton, Linn and Coos Counties.
- Projects to recover edible food from groceries and other food businesses for redistribution to food insecure populations in Marion, Polk, Deschutes and Jackson Counties and the Portland Metropolitan area.
- Planning to evaluate expanded recycling services in Douglas County and creating a materials management plan in Eugene.
- Waste prevention and recycling programs in rural and low-income schools across the state.

Next step will be to complete the agreements with grant recipients by July 31, 2017.

RECYCLING:
RESEARCH PROGRAM SEEKS
MRF PARTNER

BY SARAH LINDSAY, AMERICAN CHEMISTRY COUNCIL

The Materials Recovery for the Future (MRFF) research program today announced plans to partner with a U.S. material recovery facility (MRF) and the community(s) it serves to pilot curbside recycling of flexible packaging. MRFF is offering technical assistance and financial stewardship to help upgrade the U.S. MRF that participates in the pilot.

The research program is seeking a partner facility for the pilot that processes at least 20 tons per hour and meets other essential criteria. Interested communities or managers of MRFs that meet these criteria should contact Susan Graff, Vice President, Resource Recycling Systems (sgraft@recycle.com) before April 7, 2017.

To assist the collective decision to enter into a pilot partnership, RRS developed an economic feasibility model for adding flexible packaging to a MRF’s sorting capabilities. The model provides customized outputs that assess the costs and benefits associated with adding flexible packaging to single-stream recycling systems in a pro forma format.

“With this pilot, we aim to demonstrate the potential to capture flexible film packaging and use the material as a feedstock for U.S. manufacturing while improving the quality of other recycling streams processed at MRFs,” said Stephen Sikra, section head, Global Research and Development, The Procter and Gamble Company.

Flexible packaging is currently present in MRF infeed from curbside collection, but MRFs typically pay to ship the material to a landfill rather than recover it for energy production or remanufacture. The use of flexible packaging is projected to grow because its consumer benefits and affordability are widely recognized, so collection and recycling strategies are critical.

Additionally, participating in this new pilot is expected to benefit our MRF partner by improving the quality of paper products through the removal of unintended flexible packaging. “Flexible packaging is often disposed of as a contaminant of paper products. MRFs were not originally designed to sort this light weight format into a high quality product. The members of Materials Recovery for the Future—manufacturers, brands, retailers, and recyclers—are actively working to pilot a system that helps the recycling industry develop a new flexible product and better serve consumer demand for recycling,” said Susan Graff, RRS vice president and MRFF project director.

The MRF flexible packaging pro forma will vary by location depending on the availability of local end markets as well as the quality of sortation. To further improve the value proposition for those factors, RRS is conducting advanced optical sorter testing with equipment manufacturers, as well as a commodity end-use market assessment with a goal of describing product bale specifications for the Association of Plastic Recyclers.

“The intent of the pilot is to help communities that want to recover potentially valuable materials instead of landfilling them and partner with innovators in the MRF industry to recycle this material,” said Jeff Wooster, global sustainability director for Dow Packaging and Specialty Plastics and MRFF chairperson.

“Dow is committed to working in partnership with communities and industry to recycle all their packaging, and this pilot will be a major step towards making this a reality.”

(Continued, see MRFF, page 36)
The MRFF project members include The Dow Chemical Company, LyondellBasell Industries, Nestlé Purina PetCare and Nestlé USA, PepsiCo, Plum Organics, Procter & Gamble, SC Johnson, Sealed Air, and Target as well as the Association of Plastics Recyclers, Flexible Packaging Association, The Plastics Industry Association, and the American Chemistry Council.

For more information about the pilot or to learn how your company can join Materials Recovery for the Future, please contact Sarah Lindsay: sarah_lindsay@americanchemistry.com.

MRFF PROJECT
Materials Recovery for the Future is an initiative of the Foundation for Chemistry Research and Initiatives, a 501(c)(3) tax-exempt organization established by the American Chemistry Council.

Avangard Innovative, which for years has managed commercial recycling streams and sold scrap to manufacturers, is gearing up to play a larger role in resin production.

The Houston-based company will construct a $10 million facility for recycling polyethylene film into LDPE pellets to produce new film. The company announced the new plant on Monday, concurrent with the Plastics Recycling 2017 conference in New Orleans.

The 40,000-square-foot facility, which is slated to start up later this year, will be built in Houston and will have an annual production capacity of 48 million pounds per year. The feedstock will consist of material collected solely from commercial sources, initially excluding post-consumer bags collected at the front of the store.

Jon Stephens, Avangard’s executive vice president, pointed to several factors coming together to spur the new production facility, with equipment innovation as the chief driver.

“In the last three years, technology in extrusion and filtration has advanced to the point where we feel that we can produce a quality post-consumer resin to go back into film, without having to wash it,” Stephens told Plastics Recycling Update.

Diverse operations
Avangard, a recycling and waste optimization company led by Rick Perez, president and CEO, manages recycling programs for large commercial clients, including manufacturers, retailers, logistics companies and more. Besides the U.S., Avangard operates in Latin America and Asia with locations in 13 countries overall.

In 2002, Avangard moved directly into the production business itself when it started an HDPE and PP recycling plant in Houston, which used seven grinders, two extruders, blending silos and more. But when the market crashed in 2008, the company decided to shutter that operation, liquidate the equipment and take a step back.

In 2006, Avangard made another foray into the production of post-consumer resin as a founding partner of PETStar, the large-scale Mexican PET reclaimer, although that business is now operated by a different company.

Avangard has also entered into equipment manufacturing, currently producing a foam densifier.

Timing is right
Stephens identified a few key developments that spurred the recent LDPE investment.

The company recently evaluated all its material streams and found polyethylene film makes up the majority of plastic commodities Avangard currently manages, at about 100 million pounds each year for its clients in the Americas. The company moves the material into domestic and export markets.

In addition, the company took note of the achievements in extrusion and filtration technologies, particularly when they advanced to the point where the washing stage could be completely cut out of the LDPE recycling process.

Stephens said the production side of the business will also help Avangard minimize some of its commodity sales risk by allowing it to produce a higher-value product that can be sold into domestic markets.

Avangard’s move to expand into production could be seen as putting the company in competition with its raw recovered materials sales clients. But Stephens noted the company manages 100 million pounds of film each year.

(Continued, see LDPE, page 38)
and will be using roughly half of that as a feedstock for its own production line.

The company will continue to sell much of the material it manages and aims to expand recovery of polyethylene film streams by using smart technology and data analytics to help retailers and other clients maximize the amount of film they are recycling.

“We’re seeing organic growth with our existing account base today, just by working with them to improve their process and recover the scrap they generate,” Stephens said.

**Investment specs**
The key to the new facility’s success is the front-end sorting technologies and blending knowledge, Stephens said.

“Since we manage this material directly already, we feel that we know how to control those sources and we have a proper blend of these different sources to make a consistent product,” Stephens said. “We’re very conscious that this is our key to success.”

The plant will use MSS optical sorting technology. The film will be processed using two Starlinger recoSTAR dynamic 165 C-VAC extruders. The line will also utilize Ettlinger continuous filtration technology.

Avangard plans to have the first phase of the facility up and running by August. A second line scheduled to be installed in October will bring it up to full operating capacity. The facility will operate 24 hours per day, seven days a week, and it will employ between 30 and 35 employees, Stephens said.

Although Avangard is looking into other applications for its recycled LDPE pellets, for now the company is focused fully on the film market.

“There’s not a lot of current capacity in the U.S. marketplace that produces high-quality post-consumer resin to go back to film,” Stephens said. “There’s a lot of opportunity that we see in the market.”

The company collects solely from commercial clients right now because films generated by materials recovery facilities (MRFs) and through retail film collections are too contaminated to provide the same quality. As Avangard’s production business grows, Stephens said it will monitor the possibility of buying from the MRF market.

“It’s not off the table,” he said. “We want to become a solution to the industry, but I do think that the washing technology has to advance a little bit further, especially from an economic standpoint, for us to be able to consider that.”

Wood-alternative manufacturer Trex closed 2016 with record sales and earnings, but the company doesn’t plan any significant changes to its downsized recycled polyethylene pellet business.

Overall, Winchester, Va.-based Trex posted $480 million in net sales in 2016, a 9 percent increase over 2015, company officials announced in a Feb. 21 conference call. The publicly traded company saw 13 percent sales growth from 2014 to 2015.

Trex uses recycled plastics and reclaimed wood to make composite decking products and other outdoor home items.

Net income at the company jumped by a larger percentage than in previous years, a 41 percent spike from $48 million in 2015 to $68 million in 2016.

Bryan Fairbanks, chief financial officer, attributed the positive growth to “increasing demand for our high-performance decking and railing products,” as well as “substantial reductions in manufacturing costs.”

**No increase in pellet sales**

Trex, the largest consumer of recovered PE film in the country, began selling LLDPE pellets in 2015 as a way to monetize the excess raw material from its own recovered PE purchases. In previous updates to investors, company officials predicted the pellet sales could bring in $50 million to $80 million within four years of beginning sales.

But a year later, with low oil prices driving down demand and prices for recovered PE, Trex CEO James Cline announced the company was reducing the amount of recyclable PE it buys, lessening the excess available for resale.

In last week’s update to investors, Cline said there is “no increase anticipated of any significance related to our pellet business” and did not speculate about what effect rising PE prices would have. He said the company’s record sales “more than offset our planned reduction” in recycled LLDPE sales.

Still, Trex’s pellets recently received attention from the International Code Council, which certified that the company’s “Spartan” and “Cardinal” LLDPE pellet lines are both made from 100 percent post-consumer content.

“Companies can be assured that using Trex pellets can help meet their recycled content requirements and sustainability goals, while reducing their reliance on virgin and off-spec resin,” Dave Heglas, the company’s senior director of material resources, stated in a press release.

During the investor update, Cline said the certification “is beginning to generate a modest level of interest with bag manufacturers both here and overseas,” but he added that “it remains to be seen how impactful that will be.”

LEGISLATION:
CALIFORNIA LEGISLATURE GEARS UP FOR 2017
BY LAURIE HANSEN, WPA LEGISLATIVE DIRECTOR

The California Legislature is in full swing with committee hearings beginning this month and bills affecting the plastics industry on their agenda.

For the foodservice ware industry, two bills could prove to be significant.

AB 1659, by Assemblyman Low, would set up Extended Producer Responsibility programs for plastic foodservice ware. Although the bill has been introduced in “spot form,” amendments that have been circulated are very far reaching.

The amendments would require all resin types 1–7 to establish “Product Stewardship” organizations, fees on products, and develop a plan for funding projects and programs including recycling infrastructure improvements, litter abatement, storm water pollution activities among others.

The bill requires Material Recovery Facilities (MRF) to process and sort foodservice packaging; authorizes local governments to collect 1–7 plastics for recycling; and sets goals for 75% public access by 2043 for recycling of plastic foodservice ware.

SB 705, by Senator Allen, will prohibit food providers from dispensing prepared food to a customer in a disposable foodservice container unless the disposable food service container is accepted for recovery by the recycling or composting program servicing the food provider. This bill would cover plates, cups, bowls, trays and hinged lid containers. Not included would be single-use disposable items, such as straws, cup lids, utensils and packaging for unprepared foods.

The Legislature will be in session until September, 2017. With the high number of newly elected Legislators, it will be a long session. Democrats now hold a “super majority” in both houses of the Legislature. Democrats do not need any Republicans to vote for bills that require a 2/3 majority vote—such as taxes, fees and the State Budget.

WPA will monitor all the amendments made to bills and report to the members. Following (see page 41) is the initial bill list that WPA will be monitoring. Many of these bills were introduced in “spot” form—meaning they will have substantive amendments made in the next month.

If you have any questions, please do not hesitate to contact WPA at info@westernplastics.org. 

MANY OF THESE BILLS WILL HAVE SUBSTANTIAL AMENDMENTS IN THE NEXT MONTH.

Laurie Hansen, Executive and Legislative Director for Western Plastics Association
WPA TRACKED BILLS

PLASTICS

AB 1287  (Acosta R) Solid waste: plastic products.
Current Text: Introduced: 2/17/2017 | Status: 3/13/2017-Referred to Com. on NAT. RES.
Summary: Current law, until January 1, 2018, requires a manufacturer or supplier of plastic products making an environmental marketing claim relating to the recycled content of a plastic food container product to maintain specified information and documentation in written form in its records in support of that claim, and to provide that information and documentation upon request or on the Internet, as specified. This bill would extend the operation of that provision indefinitely. Position: Watch

AB 1294  (Berman D) Solid waste: plastic products.
Current Text: Introduced: 2/17/2017 | Status: 3/13/2017-Referred to Com. on NAT. RES.
Summary: Current law, until January 1, 2018, requires a manufacturer or supplier of plastic products making an environmental marketing claim relating to the recycled content of a plastic food container product to maintain specified information and documentation in written form in its records in support of that claim. Current law provides for the imposition of a civil penalty by a city, county, or the state for a violation of those provisions. This bill would postpone the repeal of the provision concerning recycled content marketing claims until January 1, 2028. Position: Watch

AB 1699  (Low D) Food service packaging.
Summary: The California Integrated Waste Management Act of 1989, which is administered by the Department of Resources Recycling and Recovery, requires every rigid plastic packaging container, as defined, sold or offered for sale in this state, to generally meet one of specified criteria. This bill would declare the intent of the Legislature to enact subsequent legislation that would create a recycling program for food service packaging and would make related findings and declarations. Position: Watch

SB 705  (Allen D) Solid waste: disposable food service containers.
Summary: Would enact the Ocean Pollution Reduction Act of 2017, which would prohibit a food provider, on and after January 1, 2021, from dispensing prepared food to a customer in a disposable food service container unless the disposable food service container is accepted for recovery by the recycling or composting program serving the food provider, and would define related terms. Position: Watch

RECYCLING

AB 319  (Stone, Mark D) Recycling: single-use plastic beverage container caps.
Current Text: Introduced: 2/6/2017 | Status: 2/21/2017-Referred to Com. on NAT. RES.
Summary: The California Integrated Waste Management Act of 1989, which is administered by the Department of Resources Recycling and Recovery, requires every rigid plastic packaging container, as defined, sold or offered for sale in this state, to generally meet one of specified criteria. This bill would prohibit a retailer, on and after January 1, 2020, from selling or offering for sale a single-use plastic beverage container with a cap that is not tethered to or contiguously affixed to the beverage container. The bill would define terms for purposes of these provisions. Position: Watch

AB 1288  (Eggman D) Solid waste: charges.
Current Text: Introduced: 2/17/2017 | Status: 3/13/2017-Referred to Com. on NAT. RES.
Summary: The California Integrated Waste Management Act of 1989 requires the operator of a disposal facility to pay to the State Board of Equalization a fee based on the amount of all solid waste disposed of at each disposal site. The act requires the department to establish the amount of the fee, as specified, and limits the fee to a maximum of $1.40 per ton. Current law requires the moneys collected from the fee to be deposited in the Integrated Waste Management Account and requires the moneys in the account to be used by the department, upon appropriation, for specified purposes, including, among others, the administration and implementation of the act. This bill would require the department to use the moneys in the account also to maintain a prudent reserve for the administration and implementation of the act. Position: Watch
AB 1417 (Cunningham R) California Beverage Container Recycling and Litter Reduction Act.
Summary: The money in the California Beverage Container Recycling Fund is continuously appropriated to the department to pay, among other things, handling fees to supermarket sites, nonprofit convenience zone recyclers, and rural region recyclers. Existing law requires every dealer to post a clear and conspicuous sign at each public entrance to the dealer’s place of business that specifies certain information relating to beverage container recycling opportunities. This bill would make nonsubstantive changes to these provisions. Position: Watch

AB 1522 (Limón D) Beverage containers.
Summary: The California Beverage Container Recycling and Litter Reduction Act requires that every beverage container sold or offered for sale in this state have a minimum refund value. The act requires a beverage manufacturer to clearly indicate on all beverage containers sold or offered for sale by the beverage manufacturer a specified message relating to the beverage container’s redemption value or refund by either printing or embossing the beverage container or by securely affixing a clear and prominent stamp, label, or other device to the beverage container. This bill would make nonsubstantive changes to these provisions. Position: Watch

AB 1579 (Daly D) Recycling: beverage containers.
Summary: The California Beverage Container Recycling and Litter Reduction Act, which is administered by the Department of Resource Recovery and Recycling, is established to promote beverage container recycling and provides for the payment, collection, and distribution of certain payments and fees based on minimum refund values established for beverage containers. Current law defines the term “beverage” for these purposes to include certain types of products in liquid, ready-to-drink form, as specified. This bill would make nonsubstantive changes to the provision defining “beverage.” Position: Watch

SB 60 (Glazer D) Recycling: beverage containers: convenience zones.
Summary: Would, until July 1, 2017, exempt from the requirement that each convenience zone be served by at least one certified recycling center (1) a convenience zone that was served by or exempted because of a recycling center that closed between January 1, 2016, and March 31, 2016, or that is closed as a result of an action taken by the Department of Resources Recycling and Recovery on or after July 1, 2016, and (2) a convenience zone that is in a jurisdiction with a land use restriction that prevents the siting or operation of a certified recycling center on or after July 1, 2016. Position: Watch

SB 168 (Wieckowski D) California Beverage Container Recycling and Litter Reduction Act: infractions.
Current Text: Amended: 2/28/2017 | Last Amended: 2/28/2017 | Status: 3/8/2017-Re-referred to Com. on EQ.
Summary: Under current law, a violation of the California Beverage Container Recycling and Litter Reduction Act is an infraction, punishable by a fine of $100 for each initial separate violation. This bill would increase the fine to $200 for each initial separate violation. Position: Watch

SB 458 (Wiener D) Beverage container recycling: San Francisco Mobile Recycling Program.
Summary: Would authorize the Department of Resources Recycling and Recovery to certify one operator to establish the San Francisco Mobile Recycling Program that incorporates all convenience zones in the City and County of San Francisco and would impose similar program requirements. Position: Watch

COMPOSTING & ANAEROBIC DIGESTION

AB 881 (Gallagher R) Solid waste: composting: anaerobic digestion.
Summary: Would express the intent of the Legislature to enact legislation to encourage investment in anaerobic digestion. Position: Watch

(Continued, see page 43)
THE VOICE OF THE PLASTICS INDUSTRY IN THE WEST

AB 954  (Chiu D)  Organic waste: reduction.
Current Text: Introduced: 2/16/2017  |  Status: 3/2/2017-Referred to Com. on NAT. RES.
Summary: Would require the Department of Resources Recycling and Recovery to include in the analysis of the progress made on the organic waste reduction targets the status of industry efforts and federal legislation to reduce consumer food waste, including the adoption of uniform labels on food. By adding to the duties of local governments related to organic waste in landfills, this bill would impose a state-mandated local program. Position: Watch

AB 1036  (McCarty D)  Organic waste: composting.
Current Text: Introduced: 2/16/2017  |  Status: 3/6/2017-Referred to Com. on NAT. RES.
Summary: Current law requires the California Environmental Protection Agency and the Department of Food and Agriculture, with the Department of Resources Recycling and Recovery, the State Water Resources Control Board, and the State Air Resources Board, to, among other things, assess the state's progress towards developing the organic waste processing and recycling infrastructure necessary to meet the state goals specified in certain state laws and documents. This bill would require those entities to assess the state's progress towards developing the organic waste processing and recycling infrastructure necessary to meet the state goals specified in an additional state law, as provided, and would make other changes in these provisions. Position: Watch

MARINE DEBRIS

AB 1594  (Bloom D)  Ocean protection: plastic pollution.
Current Text: Introduced: 2/17/2017  |  Status: 3/16/2017-Referred to Com. on NAT. RES.
Summary: Would require the Ocean Protection Council, on or before January 1, 2019, to complete a study identifying the primary sources and types of ocean plastic pollution, as determined by an analysis of beach clean-up efforts in the state, including recommendations to be provided to the Legislature regarding legislative action or other strategies that may be implemented by the state to reduce plastic pollution on state beaches and in ocean waters. The bill would also make related legislative findings and declarations regarding the need to prevent and clean up ocean waste, including plastic pollution. Position: Watch

GREENHOUSE GAS

Current Text: Amended: 3/2/2017  |  Last Amended: 3/2/2017  |  Status: 3/6/2017-Re-referred to Com. on NAT. RES.
Summary: Would require the State Air Resources Board to report to the appropriate policy and fiscal committees of the Legislature to receive input, guidance, and assistance before adopting guidelines and regulations implementing the scoping plan and a regulation ensuring statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030. This bill contains other related provisions and other existing laws. Position: Watch

Current Text: Introduced: 2/9/2017  |  Status: 2/21/2017-Referred to Com. on NAT. RES.
Summary: Would require the State Air Resources Board to consider and account for the social costs of the emissions and greenhouse gases when adopting those rules and regulations. The bill would authorize the state board to adopt or subsequently revise new regulations that establish a market-based compliance mechanism, applicable from January 1, 2021, to December 31, 2030, to complement direct emissions reduction measures in ensuring that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030. Position: Watch

AB 1342  (Flora R)  Greenhouse Gas Reduction Fund: appropriations.
Current Text: Introduced: 2/17/2017  |  Status: 3/13/2017-Referred to Com. on NAT. RES.
Summary: Would continuously appropriate $100,000,000 from the Greenhouse Gas Reduction Fund to the Department of Forestry and Fire Protection for healthy forest programs that reduce greenhouse gas emissions caused by uncontrolled wildfires, as specified. The bill would continuously appropriate $100,000,000 from the fund to the Department of Resources Recycling and Recovery for in-state organic waste recycling projects that reduce greenhouse gas emissions, as specified. Position: Watch

(Continued, see page 44)
TOXICS

AB 514 (Salas D) Surplus household consumer product waste: management.
Current Text: Introduced: 2/13/2017 | Status: 2/14/2017-From printer. May be heard in committee March 16.
Summary: Current law requires the Department of Toxic Substances Control to convene a Retail Waste Working Group, as prescribed, to consider and make findings and recommendations relating to requirements for the management of surplus household consumer products, waste reduction opportunities for those products, and waste management requirements, as specified. Current law requires the working group to report these findings and recommendations to the Legislature by June 1, 2017. This bill would express the intent of the Legislature to adopt those recommendations later in the current legislative session. Position: Watch

Summary: Would require a manufacturer of a cleaning product, as defined, that is manufactured or sold in the state on or after January 1, 2018, to disclose ingredients contained in and health impact information related to the cleaning product on the product label, post the cleaning product ingredient information on the manufacturer’s Internet Web site, and include specified information on the cleaning product’s label concerning ingredients contained in the cleaning product, including Internet Web sites where more information may be found.
Position: Watch

MANUFACTURING

AB 600 (Cooper D) Manufacturing incentives.
Current Text: Introduced: 2/14/2017 | Status: 2/15/2017-From printer. May be heard in committee March 17.
Summary: Would express the intent of the Legislature to improve the state’s manufacturing incentives to promote a stronger California economy by securing a greater share of the high-paying, high-skilled jobs in manufacturing and research and development and would make legislative findings in this regard. Position: Watch

AB 814 (Bloom D) Consumer protection: enforcement powers: investigatory subpoena.
Current Text: Amended: 3/15/2017 | Last Amended: 3/15/2017 | Status: 3/16/2017-Re-referred to Com. on JUD.
Summary: Current law authorizes a district attorney, upon reasonable belief there has been a violation of the Unfair Competition (UCL) or various other laws related to unfair business practices, to exercise all the powers granted to the Attorney General as a head of department to investigate the potential violation, including the authority to issue subpoenas. This bill would specify that this investigatory power granted to the Attorney General as a head of a department applies to a city attorney of a city having a population in excess of 750,000 or to a city attorney in the city and county when those city attorneys reasonably believe that there may have been a violation of the UCL. Position: Watch

AB 912 (Obernolte R) Small business: California Small Business Regulatory Fairness Act.
Current Text: Introduced: 2/16/2017 | Status: 3/2/2017-Referred to Coms. on J., E.D., & E. and A. & A.R.
Summary: Would require a state agency to assist a small business, as defined, in complying with all statutes and regulations administered by the state agency and in any enforcement action by the state agency. The bill would require a state agency to establish a policy, by December 31, 2018, that provides for the reduction, and under certain circumstances waiver, of civil penalties for a small business based upon mitigating factors including, but not limited to, that the violation by the small business did not pose an imminent health, safety, or environmental threat. Position: Watch

AB 916 (Quirk-Silva D) Workforce development: local workforce development board.
Current Text: Introduced: 2/16/2017 | Status: 3/2/2017-Referred to Com. on J., E.D., & E.
Summary: The federal Workforce Innovation and Opportunity Act of 2014 provides for workforce investment activities, including activities in which states may participate. Current law contains various programs for job training and employment development, including work incentive programs, as specified, and establishes local workforce development boards to perform duties related to the implementation and coordination of local workforce development activities. This bill would add to those duties requirements to address the differing training needs of employers within the region based on size and legal structure of the business organization and to identify and promote strategies that support the training needs of emerging and dominant business types, as specified. Position: Watch

(Continued, see page 45)
**AB 958** (Ting D) Fair packaging and labeling.
Summary: The Sherman Food, Drug, and Cosmetic Law, among other things, generally regulates the packaging and labeling of a food, drug, device, or cosmetic. The law provides that specific federal regulations relating to packaging and labeling are the regulations of this state and authorizes the State Department of Public Health to promulgate additional regulations, except as prohibited. This bill would make technical, nonsubstantive changes to the cross-references to the adopted federal regulations. **Position: Watch**

**AB 1132** (Garcia, Cristina D) Nonvehicular air pollution: order of abatement.
Current Text: Introduced: 2/17/2017 | Status: 3/6/2017-Referred to Com. on NAT. RES.
Summary: Current law regulates the emission of air pollutants by stationary sources and authorizes the regional air quality management districts and air pollution control districts (air districts) to enforce those requirements. Current law authorizes the governing boards and the hearing boards of air districts to issue an order for abatement, after notice and a hearing, whenever they find a violation of those requirements. This bill would authorize the air pollution control officer, if he or she determines that a person has violated those requirements and the violation presents an imminent and substantial endangerment to the public health or welfare, or the environment, to issue an order for abatement pending a hearing before the hearing board of the air district. **Position: Watch**

**SB 189** (Bradford D) Workers’ compensation: definition of employee.
Current Text: Introduced: 1/26/2017 | Status: 2/9/2017-Referred to Com. on L. & I.R.
Summary: Current law defines an employee, for purposes of the laws governing workers’ compensation, to include, among other persons, officers and members of boards of directors of quasi-public or private corporations while rendering actual service for the corporations for pay. Current law excludes from that definition an officer or member of the board of directors of a quasi-public or private corporation, as specified, who owns at least 15% of the issued and outstanding stock and executes a written waiver of his or her rights under the laws governing workers’ compensation, stating under penalty of perjury that he or she is a qualifying officer or director. This bill would expand the scope of the exception described above to apply to an officer or member of the board of directors of a quasi-public or private corporation who owns at least 10% of the issued and outstanding stock and executes a written waiver, as above. **Position: Watch**

**SB 551** (Hueso D) California Pollution Control Financing Authority: Capital Access Loan Program for Small Businesses.
Current Text: Introduced: 2/16/2017 | Status: 3/10/2017-Set for hearing April 5.
Summary: Until April 1, 2017, the Capital Access Loan Program requires a participating financial institution, when making a qualified loan that will be enrolled under the act, to require the qualified business to which the loan is made to pay a fee of not less than 1% of the principal amount of the loan, but not more than 3 % of the principal amount, for deposit in the loss reserve account. Commencing April 1, 2017, the act requires a participating financial institution, when making a qualified loan that will be enrolled under the act, to require the qualified business to which the loan is made to pay a fee of not less than 2% of the principal amount of the loan, but not more than 3 % of the principal amount, for deposit in the loss reserve account. This bill would instead require the qualified business to which the loan is made to pay a fee of not less than 1% of the principal amount of the loan subject to that principal amount for deposit in the loss reserve account. **Position: Watch**
Fearing a federal rollback of long-standing protections for air quality, clean water, endangered species and workers’ rights, California Democrats are pursuing legislation that would cement those environmental and labor regulations in state law.

The trio of bills announced Thursday also seek to use state authority to block private development of federal lands in California and extend some safeguards to federal whistleblowers.

“Californians can’t afford to go back to the days of unregulated pollution,” Senate President Pro Tem Kevin de León said at a press conference. “So we’re not going to let this administration or any other undermine our progress.”

Efforts by former President Barack Obama to address climate change and other environmental problems are expected to be largely reversed under President Donald Trump, who is already targeting regulations, such as an Obama rule to keep coal mining waste out of waterways, that he says hurt industry and kill jobs.

De León and other state senators who joined him Thursday pointed to a litany of developments over recent months that compelled them to act: Trump calling climate change a hoax; proposals to eliminate the U.S. Environmental Protection Agency; the confirmation of Scott Pruitt, who as attorney general of Oklahoma repeatedly sued the EPA, to lead the agency.

“We’re locking in at least some baseline so that people in the state of California can trust that we’re going to have their back to preserve the quality of California that they’ve all come to expect and know that progress can still be made,” said Sen. Henry Stern, D-Los Angeles.

De León and Stern are joint authors of the main legislation, Senate Bill 49, which would prohibit state and local agencies from adopting rules that are less stringent than those currently in place under the federal Clean Air Act, Clean Water Act, Safe Water Drinking Act, Endangered Species Act and worker safety standards.

Senate Bill 50, by Sen. Ben Allen, D-Santa Monica, aims to discourage new resource extraction by private companies on public lands. It would void transfers in ownership of federal land in California unless the State Lands Commission is given the right of first refusal.

Senate Bill 51, by Sen. Hannah-Beth Jackson, D-Santa Barbara, forbids state licensing agencies from taking disciplinary action against government-employed scientists and researchers who reveal wrongdoing. It also directs California environmental and public health agencies to preserve any scientific information or data that federal authorities order destroyed.

The Legislature has tried a similar tactic before. In 2003, as then-President George W. Bush moved to weaken a similar rule at the federal level, California passed a law requiring the state’s older factories, refineries and power plants to update their pollution-control equipment when they upgrade their facilities.

February’s quarterly auction of carbon dioxide emission allowances under California’s cap and trade program was another financial washout for the state. Results for last week’s auction were posted Wednesday morning, revealing that just 16.5 percent of the 74.8 million metric tons of emission allowances were sold at the floor price of $13.57 per ton.

The state auctions emission allowances to polluters and speculators as part of its program to reduce greenhouse gases. The proceeds are supposed to be spent on public programs to slow climate change.

February’s auction is being closely watched by market analysts because the last three quarterly auctions in 2016 posted sub-par results. Almost all of February’s proceeds went either to California’s utilities, who sell allowances they receive free from the Air Resources Board, or the Canadian province of Quebec, which offers emission allowances through California. Both are first in line when auction proceeds are apportioned.

The ARB was offering 43.7 million tons of state-owned emission allowances, but sold just 602,340 tons of advance 2020 allowances, which means the state will see only $8.2 million, rather than the nearly $600 million it could have received from a sellout.

The paltry auction revenues will likely stall Gov. Jerry Brown’s 2017-18 budget plan to spend $2.2 billion on a variety of climate-related programs and projects, including $800 million on his bullet train project. Analysts have cited a glut of emission allowances on the market, and political and legal uncertainty over the cap and trade program for weak auction interest. The current program’s legality is being challenged in a lawsuit and expires in 2020. Brown wants it to be reauthorized by a two-thirds legislative vote to remove the legal cloud.

“Today's anemic auction results demonstrate that the state's landmark cap and trade program is in need of reform and the kind of market certainty that only the Legislature and governor can provide via statute,” Senate President Pro Tem Kevin de León said in a statement. “We need a program that both reduces pollution and provides stable funding to clean up climate emissions.”

The Legislature passes laws that direct agencies to implement policies, but agencies often have to evaluate different options for implementing these policies and develop regulations to clarify the details. When developing regulations, agencies are required to analyze the potential effects of the proposed rules. This process—known as regulatory analysis—is intended to help regulators evaluate the trade-offs between different options and select the approach that achieves the Legislature’s policy goal in a cost-effective manner.

Chapter 496 of 2011 (SB 617, Calderon) established a new process for analyzing major regulations having an estimated economic impact of greater than $50 million—known as major regulations. It required agencies to develop more extensive regulatory analysis before major regulations are proposed and required the Department of Finance to provide guidance and oversight for these analyses.

Based on our review, we find that some of the changes made by SB 617 have led to improvements in the quality and consistency of agencies’ analyses of major regulations. However, we also identified the following limitations:

1. Analyses of major regulations do not consistently follow best practices.
2. Certain analytical requirements offer limited value.
3. There is currently no requirement for retrospective review.

In light of these findings, we recommend the Legislature establish a more robust system of guidance and oversight to state agencies developing major regulations, identify opportunities to reduce or eliminate analytical requirements that provide limited value for making regulatory decisions, and require agencies to plan for and conduct retrospective reviews for major regulations.

The LAO report is available online [click here].

Assemblywoman Cristina Garcia (D–Bell Gardens) last week introduced legislation allowing Air Quality Management Districts (AQMDs) to immediately cease operations that are causing “imminent and substantial endangerment” to the public’s health or welfare or the environment through an order of temporary abatement.

“When it’s determined an operator is polluting a community at toxic levels, immediate action is necessary to protect the public,” said Garcia, chair of the Assembly Natural Resources Committee. “One day is a day too long to knowingly allow it to continue.”

Existing law regulates the emission of air pollutants and authorizes the regional AQMDs and air pollution control districts to enforce those requirements. The law also allows the governing boards and the hearing boards of those AQMDs to issue an order for abatement, but only after notice is provided and a hearing is held which can take months while the harmful pollution continues.

During the last five years, with authority to immediately cease pollution operations as proposed in this bill, scenarios like Hixson Metal Finishing in Newport Beach, Anaplex Corporation in Paramount, Exide Technologies in Vernon, and Ridgeline Energy Services in Santa Fe Springs would have been ceased immediately upon detection.

These industries are most likely to create a threat consist of those who emit lead or toxic air contaminants such as hexavalent chromium, cadmium, arsenic, asbestos, and hydrogen sulfide as well as other harmful pollutants.

“This legislation will augment local air districts’ existing authority and allow us to take immediate action to curtail a facility’s emissions if it presents an imminent and substantial endangerment to public health,” said Wayne Nastri, executive officer for the South Coast Air Quality Management District.

Assembly Bill 1132 would allow AQMDs to issue temporary orders and cease those operations that are in violation of air quality requirements through a notification to the violator outlining a pending hearing within a set timeframe and process.

The order could be rescinded prior to the hearing, which must be set within 15 days of the abatement notification and be held no more than 30 days from issuance, if the accused operator can demonstrate the endangerment situation no longer exists and has been permanently corrected.

“I’ve lived all my life in the shadows of these atrocities operating without regard for the people being poisoned,” said Garcia. “I’ve lived through the unfairnesses based on my zip code and the inefficiencies that allow it to continue disproportionally in communities of color. It’s past time we do something to address the injustice, and this bill is one step towards that challenge.”

The bill is pending committee referral.

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CHOICE THE NUMBER ONE.
MEMBER NEWS:
NEW LDPE POST-CONSUMER RESIN FACILITY SET TO CHANGE THE FILM RECYCLING LANDSCAPE

Avangard Innovative (AI) is proud to announce a $10,000,000 investment in a new state of the art manufacturing facility that will convert Low Density Polyethylene (LDPE) film packaging scrap into a high quality post-consumer resin (PCR) to be used back into film.

“With our past success in the PCR PET recycle streams, we are very excited about this new venture. With this new LDPE plant, we can vertically integrate and utilize one of the largest streams of material we manage today,” says Rick Perez, CEO.

AI manages approximately 100 million pounds annually of PE scrap film throughout the Americas from various retail sectors and generators of PE film packaging waste. By vertically integrating, AI closes the loop and meets the growing demand for PE Post Consumer Resin (PCR) that can be utilized back into film. Through extensive research on various streams in the market, AI has designated specific streams that will produce PCR that can meet the critical properties needed for film applications.

“We aim to be a solution with our PCR to be used in the highest end application possible and are committed to being fully engaged as change makers within the circular economy,” says Jon Stephens, Executive Vice President

Strategic partnerships and new technological advancements guarantees the highest quality PCR in the market place today. The new LDPE PCR processing plant boasts a robust upfront processing system that includes the latest technology in extrusion, filtration, and odor reduction. This will be one of the first plants to utilize optical sorting to prepare the film blend for extrusion. The plant will generate approximately 30 jobs and operate on a 24/7 basis. Phase one production is targeted to begin August 2017. The plant will be fully operational by October 2017, with a total capacity of 48 million pounds annually.


THIS WILL BE ONE OF THE FIRST PLANTS TO UTILIZE OPTICAL SORTING TO PREPARE THE FILM BLEND FOR EXTRUSION.
MEMBER NEWS:
INTEPLAST ADDING FILM EXTRUSION LINES IN NORTH CAROLINA, ARIZONA
BY MICHAEL LAUZON, PLASTICS NEWS

Inteplast Group is doubling up on its expansion plans for stretch film in its Charlotte, N.C., and Phoenix operations.

The company is adding a new cast extrusion line at each location, both to start up in the first quarter of 2017. They follow expansions last year that saw each location install a new cast film line to bolster Inteplast’s capacity in polyethylene stretch film. Most of the firm’s cast stretch film has a five-layer construction.

“We believe the new capacity in PE in North America will make stretch film competitive globally,” said Homer Hsieh, president of Inteplast’s AmTopp division, in an email correspondence. “We are looking to move into Mexico, Central and South America—potentially Asia with down-gauged, high-end, engineered films.”

The expansions at Charlotte and Phoenix will hike AmTopp’s overall U.S. stretch film production capacity to 385 million pounds annually. The capital investment for the two phases of expansion in Charlotte is about $18 million while similar work in Phoenix will come to about $20 million. Those figures are on top of more than $25 million Inteplast had already spent on real estate at the two locations.

Charlotte will have five extrusion lines when its latest line is up and running. Phoenix will have two extrusion lines to complement equipment for pre-stretching film to give it higher strength. The Phoenix operation recently moved within the city from its original address on Buckeye Road to Madison Street.

Employment in Charlotte will rise to about 100 while Phoenix’s staff will grow to about 55 when the second expansion phase is done. The second-phase projects are adding about 40 to Inteplast’s payroll following the 34 new hires in the first phase. In total, Livingston, N.J.-based Inteplast employs more than 7,300 at more than 50 facilities, including its flagship manufacturing complex in Lolita, Texas.

Inteplast pointed out it is creating new jobs in North Carolina and Arizona, both of which have unemployment rates of about 5 percent, vs. the current U.S. average unemployment rate of 4.6 percent.

Inteplast stated in a news release that Charlotte and Phoenix total more than 525,000 square feet of operational space.

“In addition to strengthening the manufacturing communities in both Phoenix and Charlotte, we believe strongly in continuously making investments to provide more first-rate stretch film solutions to better serve our customers,” Hsieh noted. He stated the latest expansions are “an example of the Inteplast Group commitment to the U.S. manufacturing sector.”

NatureWorks has formalized its engagement with the Ellen MacArthur Foundation’s New Plastics Economy initiative by finalizing a three-year partnership agreement.

The foundation’s initiative, which was first elucidated last year in a joint report with the World Economic Forum and analytical support from McKinsey & Company, "The New Plastics Economy – Rethinking the Future of Plastics,"[click here] brings together key stakeholders to rethink and redesign the global plastics system, starting with packaging. The chief tenants of the plan call for decoupling plastics from fossil feedstocks by exploring and adopting renewably sourced feedstocks and drastically reducing leakage of plastics into natural systems, all amid the broader context of creating an effective after-use plastics economy by improving the economics and uptake of recycling, reuse, and controlled biodegradation for targeted applications. NatureWorks has engaged with the foundation since 2015 in the development of these concepts.

At the just-concluded World Economic Forum Annual Meeting in Davos, a new report, "The New Plastics Economy—Catalyzing Action"[click here], provides a transition strategy for achieving the goals of the New Plastics Economy initiative. The strategy includes guidelines for new types of packaging, improved technology and processes for reuse, and innovations in material types and characteristics. The goals and strategies outlined in the new report are endorsed by more than 40 leading organizations representing the entire global plastics industry, from chemical manufacturers to consumer goods producers, retailers, city authorities, and recyclers.

“We welcome the partnership of biopolymers producers such as NatureWorks to our New Plastics Economy initiative,” said Rob Opsomer, lead for the Foundation’s initiative. “We look forward to working with NatureWorks and all our participants on ways for the global plastics industry to support new materials innovation, design better packaging, increase recovery rates, and introduce new models for making better use of packaging.”

“Last year, the Ellen MacArthur Foundation presented at Davos a report that outlined a comprehensive, truly global perspective on plastics innovation needs at a societal level and included a vision of the business opportunity for industry,” said Marc Verbruggen, President and CEO of NatureWorks. “As a technology and market leader in the bioplastics industry, we felt that stepping up to a three-year partnership was essential to support and provide input into the foundation’s game changing vision of the future.”

ABOUT NATUREWORKS
NatureWorks is a world-leading biopolymers supplier and innovator with its Ingeo portfolio of naturally advanced materials made from renewable, abundant feedstocks with performance and economics that compete with oil-based intermediates, plastics, and fibers, and provide brand owners new cradle-to-cradle options after the use of their products. NatureWorks is jointly owned by Thailand’s largest chemical producer, PTT Global Chemical, and Cargill, which provides food, agriculture, financial and industrial products and services to the world.

ABOUT THE ELLEN MACARTHUR FOUNDATION
The Ellen MacArthur Foundation works to quantify the economic opportunity of a more circular economic model and to develop approaches for capturing its value. The Foundation works with its partners and CE100 network to build capacity, explore collaboration opportunities and to develop circular business initiatives. The Foundation has created global teaching, learning and training platforms on the circular economy, encompassing work with leading universities, schools and colleges, and online events. 

MEMBER NEWS: SHIP & SHORE, CEO SOLIDIFY INDUSTRY LEADERSHIP

When Anoosheh Oskouian, an Iranian entrepreneur, founded Ship & Shore in 2000, she had plans to profoundly impact manufacturing for the better through her company's innovative industrial air pollution control and heat and energy recovery services. Seventeen years later, she has done just this. But she has had other impacts as well.

Oskouian, who became a U.S. citizen 26 years ago, is increasingly considered an influential immigrant and entrepreneur in the U.S. Recently CNN called her for the second time, asking for her opinion regarding Trump's new immigration ban, particularly as it related to Iranians in the U.S. Her response was: "It came as a shock. We were flabbergasted. There are many conversations happening in our community about it. Many of us are asking 'Why Iran?' Iranians like me who immigrated to the U.S. came here to benefit this country and improve their own lives," she said. "We are entrepreneurs, professors, scientists, artists."

Arriving in the U.S. in 1978, Oskouian became a chemical engineer (she also has an MBA) and today owns and runs Ship & Shore Environmental, Inc. in California. S&S today has over 100 employees and more than $10 million in annual revenue.

Altogether, Oskouian is a proponent of positive change in her industry, among her fellow Iranian peers and for young women seeking to grow professionally. She has frequent speaking roles at leading industry tradeshows and conferences. Oskouian serves on a number of regulatory and industry association boards with a passion for philanthropy. Recently she received the Stevie Women in Business award and the Ellis Island Medal of Honor in 2015, for distinguishing herself within her own ethnic [group] while exemplifying the values of the American way of life.

But her company is and has always been the primary driver of her passion. "Reducing air pollution and saving money for manufacturers simultaneously is the primary objective of Ship & Shore's strategy," says Oskouian. Anoosheh and her team work feverishly to positively influence the environmental industry and the communities in which Ship & Shore operates throughout the U.S., Canada, Asia and South America. S&S is the only company in its industry that offers a true end-to-end solution, including complete project management, assessment, design, testing, engineering, fabrication, construction, compliance and even coordinates product transportation—to the customer site—for installation and start-up.

“When Obama was elected, we knew that environmental consciousness would move to center stage and took the initiative that our equipment would incentivize clients to improve their pollution control by earning them both government incentives and tax credits. From Obama’s election through 2016, we obtained more than US$6 million in tax incentives, and now that number is close to US$7 million. We were one of the first companies to have our clients benefit from both of these funds,” says Oskouian, adding “Under Trump, we will continue to do what we do best—save money for our clients and reduce air pollution for manufacturers and for the general population.”

Ship & Shore also designs its own pollution control equipment, making it not just an equipment provider, but a creative solutions provider as well. The engineering team holds a number of patents for its air pollution control products and related equipment.

ABOUT SHIP & SHORE ENVIRONMENTAL, INC.

Ship & Shore is a Long Beach, Calif.-based woman-owned, certified business specializing in air pollution control and related systems for industrial applications. S&S helps major manufacturers meet Volatile Organic Compounds (VOC) abatement challenges by providing customized energy-efficient air pollution abatement systems for various industries, resulting in improved operational efficiency and tailored “green” solutions.

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