

Date: 03/18/2022

Subject: **Statewide collection recycling list** [per Section 22(1)(a)]
Producer-collected materials list [per Section 22(1)(b)]

In 2021, the Oregon Legislature adopted, and Governor Kate Brown signed into law, Senate Bill 582, the Oregon Plastic Pollution and Recycling Modernization Act. The Act requires numerous changes that are intended to modernize and stabilize recycling services in Oregon and further reduce the environmental impacts of certain materials across their full life cycle.

PakTech - An Oregon Based Company

PakTech is an Oregon Corporation focused on manufacturing market demanded products made from 100% recycled materials (rHDPE) and ending up with a product that itself is 100% recyclable. In 2020 alone, we utilized over 22 million pounds of rHDPE (equivalent of over 165 million milk containers) used to create the next generation of recycled products. Since PakTech elected to begin utilizing rHDPE in 2012, we have repurposed over 800 million milk containers in the production of our products, which have been shipped around the globe.

In 1998 PakTech had just over 50 employees and now has 360, fully benefited employees. We pride ourselves on providing our employees a living wage with a benefits package that is top tier for our industry. We truly believe in being a positive influence in our community and in our State.

Through extensive work PakTech has learned how to create the logistics required to locate and assemble the base recycled materials to support our manufacturing process. Unfortunately, these sources are in Vancouver, British Columbia and Los Angeles, California – not in Oregon. This means that we resort to sourcing recycled material that should be readily available in Oregon from areas that have already made the investment in infrastructure necessary to modernize their recycling programs.

PakTech's intent is to have our products materials used in conjunction with DEQ's recommendations for material to include on the uniform statewide collection list, other materials that local governments are obligated to collect for recycling as part of providing the opportunity to recycle, and the list of materials that producer responsibility organizations are required to provide recycling services for.

The following information is provided to aid in the evaluation of our product materials for consideration of inclusion for recycling, as part of the evaluation of materials against the criteria listed in Section 22(3) of the Recycling Modernization Act.

PakTech products are made from Recycled High Density Polyethylene (rHDPE)

- Statewide collection and recycling of PakTech products, be it curbside or established collection programs, already aligns with meeting the goals set forth in the Recycling Modernization Act (Senate Bill 582)
- Collection and recycling of PakTech products align with the State of Oregon's statewide recycling rate for plastic packaging goals set for 2028, 2040 and 2050 (Section 27)
- PakTech products are SCS Global Certified 100% Recycled HDPE #2 (High Density Polyethylene)
- Made from 100% Recycled Thermoplastic Polyethylene from Milk, Water, Juice and Other Un-pigmented Household Containers
- HDPE Bottle Grade fractional Melt Resin with a .955 to .965 g/cm³ Density
- Can be combined with HDPE bottles (detergent and shampoo bottles) in collections to maximize recovery efficiency.
- Can also be combined with other rigid HDPE collections for recovery efficiency
- Made of a MONO plastic being 100% HDPE with no restrictive additives or layers to hinder recyclability
- Free of toxic chemicals
- Clean and free of foreign contamination, which could cause deterioration of HDPE properties through the recycling process
- Product shape is more 3D than 2D as well as being a rigid plastic. Meets criteria established by APR for recyclability.
- Compatible with existing Oregon recycling infrastructure (Does not hinder the recycling process)
- Will not cause problems of entanglement in the sorting equipment like the flexible LDPE rings made by HiCone have been known for
- Recycled HDPE material is very well established as a viable plastic for use in many product categories and end markets such as; Pipe Industry, Building Materials, Flower Pots, Park Benches, HDPE Bottles, PakTech Handles, just to name a few...
- High demand exists for recycled HDPE plastic due to mandates and commitments across organizations and industries to incorporate 25-30% recycled content into packaging products by 2025
- PakTech alone can provide and an end-market here in Oregon for the use of 1,000 to 2,000 tons annually of recycled Mixed Color HDPE and 10,000+ tons of Natural HDPE
- Reprocessors of plastics locally in Oregon are already acquiring HDPE from Oregon's recycling stream and have additional end-markets for collected PakTech products (Denton Plastics, Northwest Polymers, Green Rhino Recycling, Merlin Plastics, etc.)
- Promotes recycling of plastics to reduce fossil fuel consumption and keep out of the environment
- Promotes circularity by keeping the material in use over and over again

We believe that realizing a sustainable world means that we all must accelerate the transition to a safe, equitable, and circular economy where people, the planet, and businesses thrive. However, reaching a circular economy for any resource, especially plastics, is a large and complex global challenge.

Google teamed up with AFARA and IHS Markit to bring big data analytics to the plastic pollution crisis. Data suggest that the circularity gap is likely going to grow significantly over the next two decades. Under a business as usual scenario, it is projected that 7.7 billion metric tons of plastics will be mismanaged—landfilled, incinerated or leaked into the environment—between now and 2040. That volume of plastic is equivalent to roughly 16x the weight of the entire human population on earth today!

While there needs to be a portfolio approach that includes plastic reduction efforts, the biggest intervention we need to capitalize on is building better recycling infrastructure. As the world transitions from linear to circular, supply chains need to be rewired and the requisite infrastructure needs to be put in place to ensure these resources are kept in the economy and out of the environment.

We plea that you accept PakTech handles curbside. Sustainability truly underpins everything we do here at PakTech and this is the missing piece to our circular economy business model. It frustrates us that our clean HDPE product isn't accepted. Our commitment to sustainability led us to launch our own recycling program that has grown exponentially to ensure our products are properly recycled and repurposed as they should be. With that comes logistical hardships and roadblocks connecting recycling partners with Reprocessors along with the quantity of collections. We are optimistic as we see more states accepting our product curbside and this number continues to grow in the right direction. We take pride that Oregon claims to be one of the greenest states in the country but are frustrated by its limited recycling capacity. We ask that you make the right decision to accept our valuable PakTech products for the state of Oregon, our environment and for the future of a circular economy.

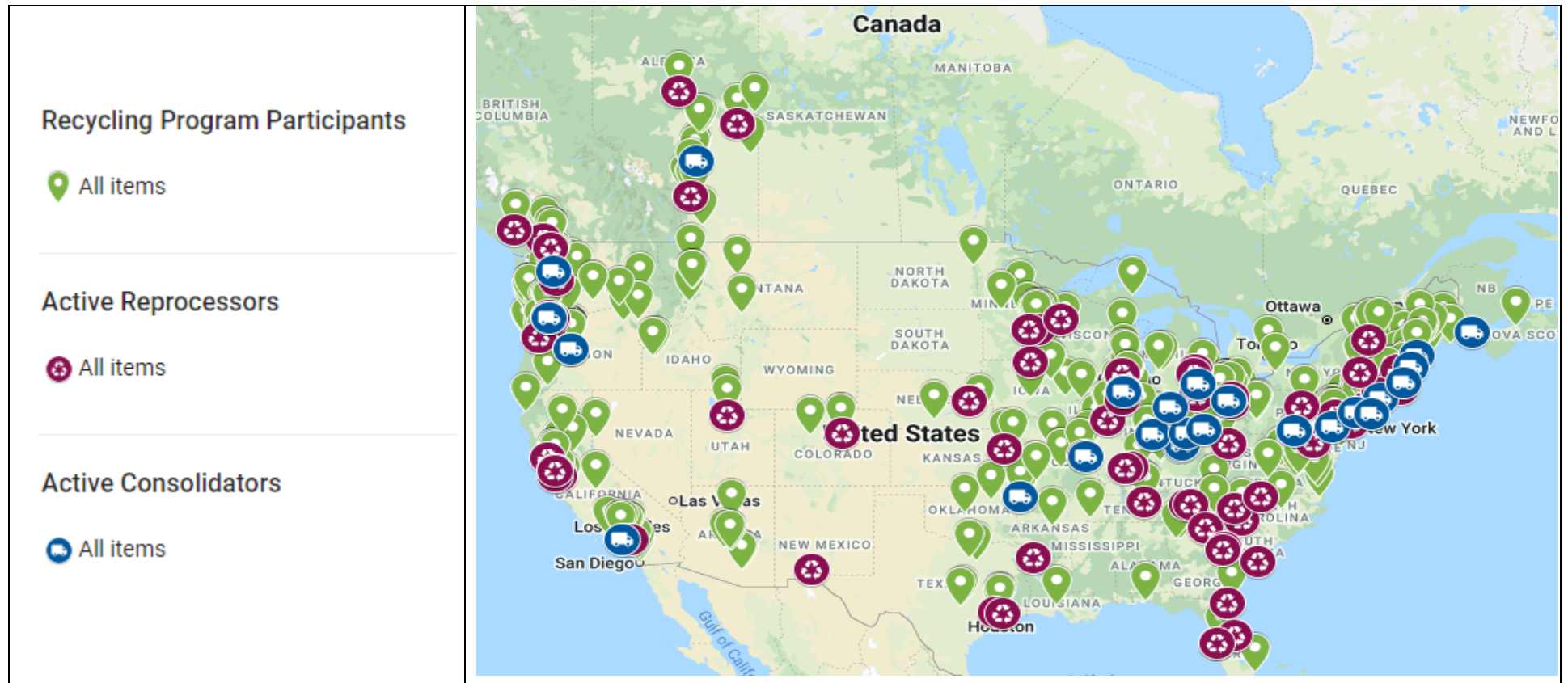


Current Recycling Activities with PakTech Products

Due to the restrictions placed on the recycling of plastics, PakTech created its own recycling program to ensure as many of our handles are recycled, repurposed and kept out of the environment as possible, to fulfill our commitment to our customers, ourselves, and to the planet we all call home.

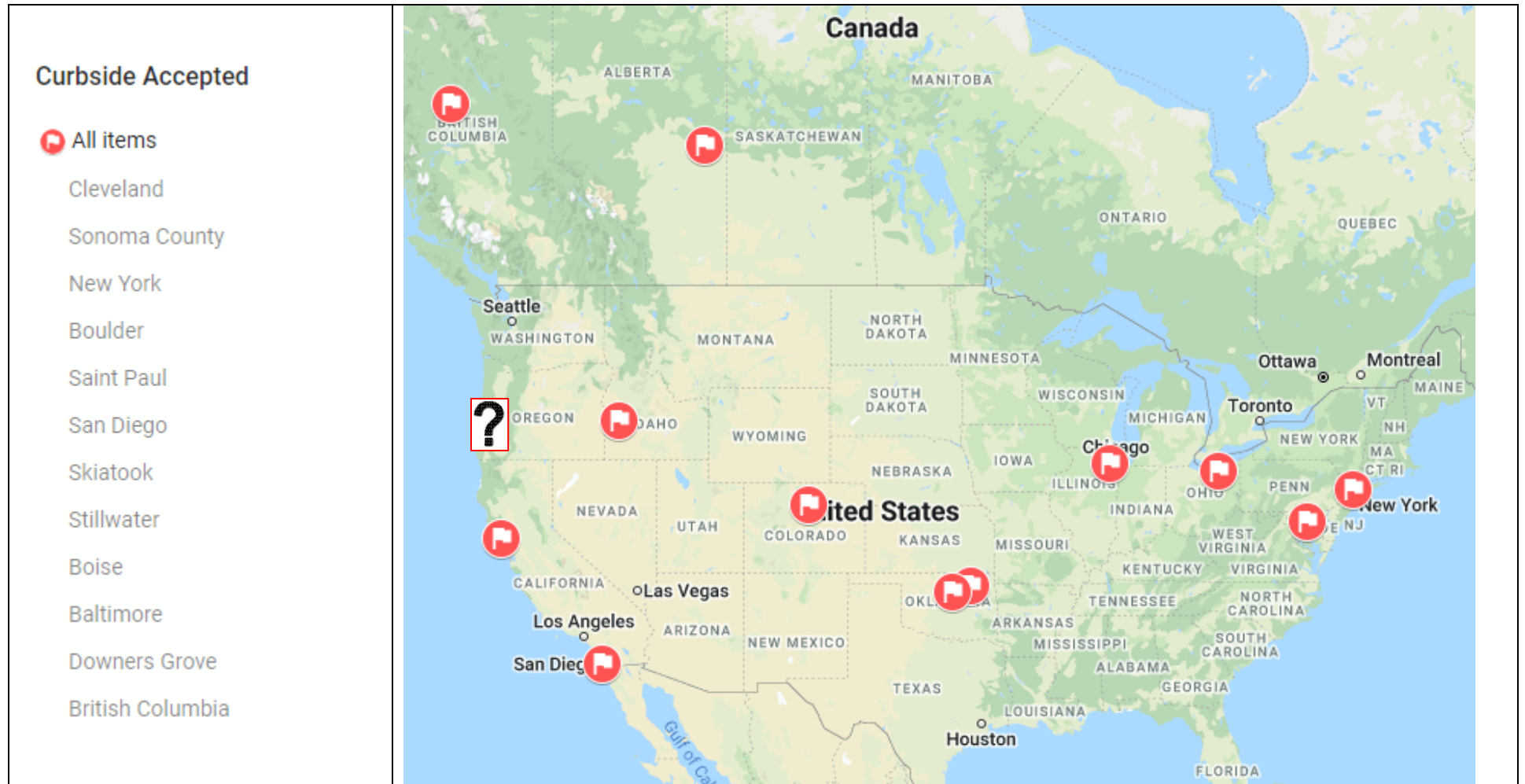
With this program, we have created over 550 recycling partnership programs across the U.S. and Canada that involve hundreds of grocery stores, breweries, markets, and recycling centers to collect and properly recycle our products.

In Oregon alone, over 13,200 pounds or 7 tons of recycled handles have been collected and repurposed into new handles, while others are recycled into a variety of new products like composite lumber, flower pots, park benches and more.



Current Curbside Recycling Activities with PakTech Products

Recyclers across the U.S. and Canada are realizing the benefits associated with the collections and recycling of PakTech Products and are currently being accepted in curbside collections in the following areas.



SCS Global Services does hereby certify that an independent assessment has been conducted on behalf of:

PakTech

1680 Irving Rd., Eugene, OR, US
230 Davidson Avenue, Cottage Grove, OR, US

For the following product(s):

Plastic Packaging: Packaging Handles – Made With 100% Recycled HDPE

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

SCS RECYCLED CONTENT CERTIFIED

Conforms to SCS Recycled Content Standard V7-0 for **100% Post-Consumer Recycled HDPE* Content**. The material quantification and mass-balance calculations are completed on a dry-weight basis.

**Made With 100% Recycled Plastic – High Density Polyethylene (HDPE)*

Registration # SCS-RC-06127
Valid from: May 14, 2021 to May 13, 2022



100% RECYCLED CONTENT
POST-CONSUMER HDPE



A handwritten signature in black ink that reads "Stanley Mathuram".

Stanley Mathuram, PE, Vice President
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

Addendum - Further Justification

We already know that plastics are replacing traditional materials, due in large part to their favorable strength-to-weight ratio that allows them to do more with less. We see that in numerous previous studies and market sectors.

Packaging – A study in the U.S. shows that if we were to replace plastic packaging with alternatives, we would dramatically increase the amount of packaging material. Alternatives would require four and a half times as much material by weight and increase the amount of packaging used by nearly 110 billion pounds annually.

Building Materials – Plastics can help save a whole lot of energy over the lives of our homes and buildings. The energy saved by using plastic materials compared to alternative materials is approximately 467.2 trillion BTU of energy a year – that’s enough to meet the average annual energy needs of 4.6 million U.S. households.

But despite measurable advances in these and other areas, the often-accepted narrative around plastics is: they are more wasteful and have greater environmental impacts than traditional materials. Is this true? While every material has environmental costs, how do plastics actually compare to alternatives?

In 2014 a study, commissioned by the United Nations Environment Program (UNEP) with Trucost, “Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry.” That study found that the “total natural capital cost of plastic used in the consumer goods industry is estimated to be more than \$75 billion per year.” The cost comes from a range of environmental impacts such as effects from marine litter and the loss of valuable resources when used plastics are sent to landfills rather than recycled.

In 2016 the American Chemistry Council commissioned an independent study by the same environmental consulting firm Trucost that looks at the broad environmental costs of using plastics in consumer goods compared to other materials. This new study, “Plastics and Sustainability: A Valuation of Environmental Benefits, Costs and Opportunities for Continuous Improvement,” provides that perspective. The report’s authors call it the largest natural capital cost study ever conducted for the plastics manufacturing sector.

The new study expands upon the initial study by including transportation as part of the life cycle of products and packaging. Most notably, it compares the environmental cost of using plastics in consumer products and packaging to the cost of replacing plastics with alternative materials.

The findings

When compared to alternatives, the new study found that the environmental cost of using plastics is four times less than the costs of other materials. Substituting plastics in consumer products and packaging with alternatives that perform the same function would increase environmental costs from \$139 billion to \$533 billion annually.

One of the likely reasons for these findings, as mentioned above, is the comparable strength-to-weight ratio of plastics. Alternative materials such as glass, tin, aluminum, and paper can be viable alternatives to plastics in many consumer goods applications. But a greater amount of these alternative materials typically is needed to accomplish the same objective. Similar to the findings in the packaging study above, this new study finds that alternatives require 4 times more material by mass on average.

In other words, using more material typically translates into higher environmental costs.

As it turns out, plastics are extremely efficient materials. Because they are both strong and lightweight, they allow us to do more with less in the 16 market sectors reviewed in the study... and in just about every aspect of modern living.

Even though plastics have significantly less impact on the environment than alternatives, the study identifies numerous opportunities to reduce that impact. These steps include increasing the use of lower-carbon sources of energy upstream, adopting lower-emission transport modes, developing even more efficient plastic packaging, and increasing recycling and energy recovery to help address ocean litter and conserve resources.

To help reduce plastics leakage into the marine environment, the study also highlighted the importance of expanding waste management infrastructure globally, particularly in Asia where other studies have determined 75 percent of marine litter originates.

The study also called for enhanced environmental leadership by the plastics industry, noting that the industry has “direct influence, or indirect influence via its supply chain management practices, over a significant share of the environmental costs of plastic use in consumer goods sector, and other sectors. Thus the industry is well positioned to play an enhanced leadership role in driving improvements in the environmental performance of the plastics value chain.”

This study represents the clearest and most comprehensive picture to date of the relative environmental costs and benefits of plastics compared to alternative materials. And by providing a path forward to further reduce these relative costs, the study provides insights for corporate decision makers, policy makers, and environmentally minded people into how plastic materials can further contribute to sustainability.

From the invention of plastic in the late 1800s to the introduction of Tupperware® in the 1940s to the latest innovations in easy-dipping ketchup packets, plastics have played an integral role in smart packaging solutions that help us do more with less. Whether it's your new electronic gadget, your favorite beauty product, or how you store lunch, plastic packaging helps protect your purchases until you're ready to use them, and that helps to reduce waste and save energy.