

Recycling Markets Disruptions

Introduction

For several years, Oregon and the rest of the world have relied on China to take much of the recyclable paper and plastics generated by residents and businesses. In fact, up to 60 percent of the world's recycling went to China. For Oregon, sending materials to China was due to the loss of local markets, the low cost of shipping materials to China, and China's acceptance of materials that often contained higher levels of contamination than U.S. markets would accept. In January 2018, the Chinese government banned the import of certain plastic and paper grades and set a much tighter contamination standard for paper (0.5 percent by weight). The loss of China's markets has disrupted recycling systems worldwide, and in Oregon, communities are making changes to their recycling programs in response.

What happened and why?

In March 2017, China imposed severe restrictions on the import of recyclable materials in a series of actions collectively called "National Sword." In July 2017, China announced a ban on the import of some grades of post-consumer plastic and unsorted paper and tightened the acceptable contamination levels. These changes went into effect on January 1, 2018.

There were several reasons for these actions:

- High levels of contamination in the materials China received from some exporters;
- The effort to close older polluting mills in China that generate significant amounts of air pollution;
- The desire to protect human and environmental health caused by hazardous recycling practices; and
- China's intent to develop its own domestic recycling systems.

Why do our materials go to China?

Over the years, China has become a manufacturing giant, producing many of the products we use and buy. As China's manufacturing has grown, so has its need for recycled materials to make products and packaging. Ships headed back to China after unloading goods along the West Coast made for cheap transportation of recyclable materials from

Western states. Also, China's need for material far exceeded the quantities of recycling collected within China.

How has this affected Oregon?

To meet China's new contamination standards, Oregon processors have added more workers, slowed down their sort lines and made other sorting improvements to remove more contaminants, which has made recycling more expensive.

In addition to the challenge of meeting China's new standards, some shipments arriving in China have been rejected for containing a single prohibited item. For many companies, it is no longer worth the risk to send materials and have an entire load rejected. Recycling processors have found some alternate markets in Southeast Asia, India and elsewhere, but these are not sufficient to absorb the loss of China's markets. The increased global competition for the remaining global markets has decreased the market value of recyclable commodities, which in turn creates a financial burden for Oregon programs.

How are communities responding?

Several communities have changed their recycling programs (i.e. what items their local recycling collection programs will accept) due to lack of viable markets for those materials and high recycling costs. Other communities have enacted rate increases to cover the increased costs of recycling.

In some instances, materials collected for recycling have been disposed of as a last resort, which is legal when the cost to recycle exceeds the cost to landfill. To date, more than 12,000 tons have been sent to landfills. For context, Oregon recycled 1.4 million tons of materials in 2016, and the current amount of materials disposed of represents less than 2 percent of all materials collected for recycling.



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maintaining and enhancing
the quality of Oregon's air,
land and water.*

What is ‘contamination’ in recycling?

Contamination refers to materials that end up in recycling containers that shouldn’t be there. This includes anything not accepted in the recycling program – even if it might be recycled in another location. Some items like food, liquids, oil and hazardous chemicals, can contaminate paper and other materials in recycling, turning whole truckloads of recyclable materials into garbage.

Why is recycling important?

Recycling provides feedstock for industry and is good for the environment. Recycling reduces the environmental impacts from resource extraction, as well as the amount of energy required to make materials compared to using virgin natural resources (93 percent less for aluminum, 43 percent less for newspaper). It also creates jobs and reduces pollution. Last year Oregon recycled 1.4 million tons of material, and if energy recovery and composting is included, that amount jumps to 2.2 million tons. Those efforts yielded a reduction of 2.9 million metric tons of CO2 equivalent emissions, which is comparable to taking 690,000 cars or their tailpipe emissions off the road.

How can I help?

Recycle right! It’s more important than ever to understand what you can recycle. Your city, county or recycling service provider will inform you of any changes in your curbside collection service. Recycling incorrectly makes recycling more expensive and can turn valuable resources to waste. All Oregonians can help by educating themselves about what materials their local recycling programs accept and only putting clean, accepted materials in recycling bins. When in doubt if something is recyclable or not, find out!

Recycling is not the only action you can take. You can conserve more energy and natural resources by buying only what you need and reusing what you have. **Reduce, reuse, *then* recycle!**

What is DEQ doing?

DEQ is working closely with industry and government partners to continue recycling as much as possible. We are exploring opportunities to clean up and expand processing capacity so materials can be marketed and recycled locally. This is an opportunity for Oregon to review its

recycling systems so we can find new ways to manage our recyclable materials in the future.

To learn more about these changes to Oregon’s recycling systems, DEQ’s response and how residents can help reduce contamination, visit DEQ’s [Recycling Markets page](#).

Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.