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ENVIRONMENT

'Recycled' at the landfill

Much of the glass from local curbside bins ends up as landfill material, not new bottles

MULTIMEDIA PHOTO



Recycling debris piles up at Delta Sand and Gravel Co. earlier this fall. (photo courtesy of Dan Revell)


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Tens of thousands of Eugene and Springfield residents routinely rinse and set aside nondeposit wine, juice and other bottles and jars, then put them out for curbside recycling in specially marked boxes.

Recycling crews haul off the glass. But that doesn't mean the glass ends up being smelted and made into new bottles and jars.



Rather, all of it is trucked to the Coffin Butte land fill near Corvallis, or occasionally to other landfills, where it is dumped, crushed and spread out on landfill roads, or layered to help with landfill drainage.

That doesn't conform to the ideals held by recycling purists. The theory behind collecting used glass is that glass manufacturers can save big amounts of energy by using waste glass in the glassblowing process, rather than making new glass from scratch from silica. Using waste glass cuts energy costs by a third or more, a good thing for society as a whole, experts say.

But for garbage haulers, it's often cheaper to send waste glass to landfills for roads or drainage use. And that's legal under Oregon's recycling rules.

"We allow it, although honestly we'd like to get rid of that use (in landfills) entirely. It's a bad image, using something in a landfill," said Peter Spendelow, a solid waste analyst with the state Department of Environmental Quality, which regulates landfills and recycling.



Sending curbside-collected glass to landfills "really doesn't have any environmental benefit it," Spendelow said.

“If you’re going to have curbside collection for bottles and send them to a land fill (for roads), why not have curbside collection for rocks?”

The crux of the problem is that while many residents are eager to recycle, it can be expensive getting certain materials — especially glass — into a condition that manufacturers want.

Under curbside pickup programs in Eugene and Springfield, residents mix different colors of glass — brown, green, clear — into a single pickup box. Sometimes they toss in other waste, too — ceramics, plastics, metal, cardboard.

That mixing of glass colors makes it difficult and expensive to send the bottles to facilities that would melt them down and make them into new glass.

Glass smelters need glass to be sorted into colors. Color impurities spoil a batch. And sorting costs money.

So instead, all bottles collected curbside by Sanipac and Lane Apex in Eugene and Springfield head to a land fill, typically Cof in Butte, said Rick Ritz, site manager for the Glenwood Ecosort facility, which markets recyclables collected in the curbside programs. Sanipac does the vast majority of curbside collection in Eugene and all the curbside collection in Springfield.

“We send 250 to 300 tons a month of mixed glass (from Eugene-Springfield) to Cof in Butte,” said Ritz.

That’s been the case for several years, after problems arose with processors in the Portland area who accepted bottles for remanufacturing into new bottles, and Ecosort stopped sending glass to Portland, he said.

Sending the glass to Cof in Butte is the cheapest legal option, so that’s what Ecosort does.

“Wasting our time ...”

Santa Clara resident Dan Revell said he’s “shocked” to learn that curbside-collected glass goes into road building at land fills.

A dedicated recycler, he said he has long assumed the glass he sets out for pickup was “being processed and made into new glass.”

“We’re wasting our time even putting it out in our totes if, at best, it’s going to be turned into road material,” he said.

Revell stepped into the used-glass-disposal quagmire earlier this fall when he spotted huge mounds of used glass bottles mixed with some other recyclables and trash freshly dumped at the Delta Sand & Gravel construction debris land fill off Division Avenue in Eugene, and complained to regulators.

The material had been hauled there by Ecosort for Delta to use for road building, Ritz said.

Ritz said his company has now switched back to sending all its curbside-collected glass to Cof in Butte.

Eugene and Springfield aren’t the only communities shipping curbside-collected glass to landfills.

Statewide, curbside pickup programs in 2010 — the most recent year for which numbers are available — collected about 51,528 tons of nondeposit glass bottles and jars, Spendelow said. But nearly half that tonnage was sent to landfills for crushing into roadbeds or drainage uses, he said. The rest was color-sorted and remanufactured into glass products, he said.

The DEQ permits a select number of landfills around the state, including Cof in Butte but not the Short Mountain Landfill in Lane County, to accept waste glass, Spendelow said.

Some at the DEQ aren’t thrilled with sending glass to landfills. But the agency isn’t planning to ban the practice and force recyclers to send the material to remanufacturers, said Gene Wong, a solid waste project manager at DEQ’s Eugene office.

The optimum outcome is for curbside-collected glass to be made into new glass, he acknowledged.

“Everyone’s trying to do the right thing, but technological and economic factors make it more difficult to do that,” he said.

Julie Daniel, a recycling expert and executive director at BRING Recycling in Glenwood, said she was unaware that local curbside-collected glass was being sent to landfills.

“I’m disappointed that the market is such that we’re not able to see it go back into making glass,” she said.

But glass is inert, so putting it in a land fill “is not harming human health,” she said.

Many people are keen to recycle, but not willing to pay the real costs of recycling, or to cut back on their consumption of disposable items, she added.

Recycling glass doesn't pay

The sole glass bottle manufacturer in Oregon, the Owens-Illinois plant in Portland, accepts only glass that has been color-sorted, Spendelow said.

Oregon's bottle bill return centers all sort their glass by color, and virtually all that glass goes to Owens-Illinois, he said.

The main other way to make sure waste glass is remanufactured is to truck it to the Portland depot of Texas-based Strategic Materials.

That depot accepts mixed-color glass, which it ships via rail to California for color-sorting by a laser system and sale to glass makers, Spendelow said.

But Oregon recycling companies have to pay the cost of hauling mixed-color glass to the Strategic Materials depot in Portland, plus pay Strategic Materials an \$18-per-ton dumping fee, he said.

“You're all of a sudden out a bunch of money,” he said.

Often the cheaper option is to send the glass to land fills, including Cof in Butte, he said.

A partial solution may emerge next year, when eCullet, a California supplier of raw materials for the glass-making industry, opens a facility in Portland that will use lasers to color-sort comingled glass, Spendelow said. “I'm hoping they will be paying for glass instead of charging (to take) it,” he said.

Still, however, if it's cheaper to haul glass to approved land fills, recyclers can do that, he said.

Either pay or sort glass

If a community wants to ensure waste glass goes to glass manufacturers, it must pay the price — either, for example, insisting that recyclers use laser-sort facilities, or requiring residents to color-sort curbside, Spendelow said.

Eugene's and Springfield's recycling ordinances and agreements don't specify that curbside-collected glass needs to be made into new glass. They just state that a recycler has to pick up the materials curbside.

Ecosort's Ritz said much of the problem traces to the cities years ago launching comingled glass curbside collection, and residents responding by putting all manner of glass items and other material into their bins.

"It's so mixed that there is no way to sort it out," he said.

The DEQ years ago decided to allow waste glass to be crushed and used at landfills because it was too expensive for remote communities in Eastern or Southern Oregon to ship their relatively small amounts of reclaimed glass to Portland, DEQ officials said.

Since then, the supply of waste glass has increased and the price has declined, making it even less attractive for recyclers to bother shipping to Portland, the state said.

The DEQ's policy is to encourage recyclers to sort glass by color and make it useful to a remanufacturer, but the agency doesn't force recyclers to do that, Wong said.

Ethan Nelson, the city of Eugene's waste prevention manager, said he suspects many residents give little thought to what happens to the glass once they set it out curbside.

"In our community, the attitude is let's put whatever item it is into this bin and it's going to get recycled and therefore I can have a good feeling about it," Nelson said.

BY THE NUMBERS

Glass recycling in 2010

Nondeposit glass bottles, jars collected curbside in Oregon: 51,528 tons

Amount remanufactured into bottles and other glass products: 27,788 tons (54 percent of total)

Amount dumped at landfills for use as road base, drainage systems, etc: 23,740 tons (46 percent)

Glass bottles collected under Oregon's bottle bill via deposit return program: 55,796 tons

Amount that was remanufactured back into bottles and other similar glass products: 55,290 tons (99 percent of total)

Amount turned into road base material at landfills: 506 tons (1 percent)

Source: Oregon Department of Environmental Quality

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