

# Plastic bottles pile up as mountains of waste

## Americans' thirst for portable water is behind drop in recycling rate

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The biggest growth in bottled beverages isn't beer or soft drinks or juices. It's tasteless, colorless and sugarless water. And while that can mean fewer cavities and slimmer waistlines, it irritates Patricia Franklin to no end.

The director of a nonprofit group that promotes recycling, she spends her workday thinking about the bottles, cans and other container waste that most Americans take for granted.

The boom in plastic water bottles has her especially frazzled because while the recycling rate is extremely low, the demand from recyclers is actually quite high.

Franklin, who runs the Container Recycling Institute, doesn't blame individuals as much as what she feels is a recycling system that hasn't kept up with consumption patterns — especially when it comes to water.

Bottled water is the single largest growth area among all beverages, that includes alcohol, juices and soft drinks. Per capita consumption has more than doubled over the last decade, from 10.5 gallons in 1993 to 22.6 in 2003, according to the Beverage Marketing Corporation.

The growth has been even more impressive in terms of water bottles sold: from 3.3 billion in 1997 to 15 billion in 2002.

But most bottled water is consumed away from home, usually at a park, in an office or even while driving — areas where there's usually no recycling.

"The opportunities for recycling outside the home are minimal," Franklin says, "and therein lies the problem."

### **Bottles by the numbers**

Only about 12 percent of "custom" plastic bottles, a category dominated by water, were recycled in 2003, according to industry consultant R.W. Beck, Inc. That's 40 million bottles a day that went into the trash or became litter. In contrast, the recycling rate for plastic soft drink bottles is around 30 percent.

The low water bottle recycling rate also impacts the overall recycling rate of all recyclable plastic containers. That's fallen from 53 percent in 1994 to 19 percent in 2003.

Plastics should be recycled so that less petroleum — a finite commodity — is consumed, Franklin says.

"The environmental impacts are in the drilling of the oil," she adds, noting that burning fossil fuel also releases gases that many scientists tie to global warming.

A second reason for recycling, Franklin says, is the litter factor. While plastic water bottles are not a significant percentage of overall waste, the empties are certainly all around us visually.

Thirdly, she says, is the fact that the domestic plastics recycling industry faces a shortage because so much is being exported to China for recycling there. That shortage has also led to fears that some companies will go bankrupt.

"There is a means to reclaim these bottles and use them to make new bottles and other products at home," Franklin says, "but they (recyclers) simply can't get enough of the containers to do it."

### **Strategies**

The Container Recycling Institute thinks a nationwide bottle deposit law would create the incentive to recycle, especially when it comes to plastic bottles, and ease the burden on taxpayers, who pay for cleaning up litter.

"A national bottle bill, or producer responsibility bill, could turn it around and shift the costs from government and taxpayers to producers and consumers," Franklin says.

States with deposit laws already recycle four out of five bottles, Franklin notes, thanks in part to an army of recyclers — from Boy Scout Troops to office cleaning crews — that turns one person's trash into their income.

Eleven states have bottle bills but they are a patchwork with no two alike, she adds, and only three states, California, Hawaii and Maine, include plastic water bottles in their laws.

A national law, she says, should cover new containers that didn't exist 20 years ago, e.g. plastic water bottles, and enforce a dime-per-bottle deposit "as it is in Michigan, where deposit containers are recovered at a rate of 95 percent."

But while deposit legislation has had varying degrees of bipartisan support in Congress over the years, it has never become law.

Franklin blames opposition from the beverage industry, saying its campaign contributions have given it "incredible political clout in Congress and actually in every state legislature in the country."

### **Beverage industry opposition**

That opposition certainly exists, but the beverage industry says it just doesn't make sense to force a deposit law on consumers.

"This cost burden placed on businesses is also passed along to consumers — levying a 'hidden tax' on both," the American Beverage Association said in an issue statement on the topic.

Curbside recycling at homes and businesses, as well as educating consumers, are the best methods for dealing with container waste, the group adds.

Tom Kinnaman, an economics professor at Bucknell University in Lewisburg, Penn., believes that while recycling is expensive the debate needs to reflect what he calls the "happiness" value of seeing litter cleaned up.

Factor that in and a deposit law can make sense, says Kinnaman, whose research includes household recycling trends.

"It turns out recycling also provides utility," he says. "It benefits society because it provides happiness for people in excess of what it costs to provide the happiness."

### **High tech, low tech**

A Colorado company called Biota says it might have a way around the deposit controversy: a biodegradable bottle. All of Biota's water bottles are made out of the biodegradable plastic, which comes from corn starch in a process developed by the seed company Cargill and Dow Chemical.

Biota says that while traditional plastic bottles can take 1,000 years to degrade in a landfill, its bottles can biodegrade within 80 days in a commercial composting operation.

Won't the bottles dissolve on store shelves? Biota says they'll only degrade if they've been emptied and placed in composting conditions — high heat and humidity as well as microorganisms to eat away.

Biota is just getting off the ground, selling to a few health food stores in California, Colorado and Nevada. But it plans to expand, and even sell via the Internet.

Franklin sees hope in the biodegradable plastic, but adds that a big, unanswered question is whether mixing those bottles with PET bottles might contaminate the latter in the recycling process, making them useless.

"The concern is if we are going to be able to transition to that type of plastic what will be some of the impacts on companies that are trying to recycle PET bottles out there," she says.

And what about a low-tech approach of just educating the public to assume more responsibility, taking those plastic bottles home to a recycling bin instead of leaving them in a trash bin at a park?

"It's unrealistic to think people are going to do that," Franklin says. "In this culture it just doesn't seem to happen."

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