



Reducing the Burden of Solid Waste in Towns and Cities

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In the United States, local governments have the responsibility of ensuring that “solid waste” – that is, the everyday trash generated by residents, businesses, and other institutions – is managed in compliance with federal and state laws and regulations. Although states have a variety of policy tools they can use to reduce the cost of waste disposal and the amounts of waste produced, local governments often have rely on recycling. Recycling can reduce costs and environmental impacts, yet the most effective local strategy involves creating measures to reduce the generation of solid waste in the first place – an approach called “source reduction.”

Local and State Approaches to Reducing Municipal Solid Waste

Many state constitutions as well as the Interstate Commerce Clause of the U.S. Constitution limit what policymakers can do to reduce solid waste at the local level. Nonetheless, many local governments have adopted bans, restrictions, fees or taxes on certain disposable consumer products like single-use shopping bags and expanded polystyrene (Styrofoam™) food service items. So far, there have not been any Constitutional challenges to such ordinances; but multiple states have enacted laws to “ban the bans,” that is legislation to prevent local governments from enacting controls on bags or Styrofoam™ cups. This has happened in Arizona, California, Florida, Idaho, Indiana, Texas, and Wisconsin. (Ironically, California’s prohibition spurred more than a hundred localities to slap fees on paper shopping bags – and on November 8, 2016, California’s ban on local ordinances was essentially overturned with the passage of Proposition 67, the first statewide ban on single-use plastic shopping bags and mandated 10¢ fee for all paper and reusable bags.)

Jurisdictions trying to reduce waste have focused on shopping bags and polystyrene food service items because these items are used only temporarily, are significant sources of land-based litter and marine debris, and can be replaced by less environmentally harmful substitutes.

Issues about Bans and Fees on Single-Use Shopping Bags

High-density Polypropylene is the primary material for thin-film, single-use plastic bags. These bags are typically 2.4 millimeters or less in thickness and weigh 7.5-12.6 grams, whereas single-use paper bags generally weigh about 43 grams. Single-use shopping bags convey goods from point of purchase to the destination – during an estimated average of just 12 minutes of useful life. The U.S. International Trade Commission estimates national, annual consumption of plastic bags at 348.3 per person, while municipal-level surveys estimate annual consumption of single-use paper bags at 442.9 per person per year. Single-use plastic bags are recycled at a very low rate estimated between 1.5 and 3%, whereas the recycling rate for paper bags is near 50%.

Prior to California’s passage of a statewide ban on plastic bags, there were 271 local ordinances – covering 12% of the population – addressing single-use shopping bags. Plastic bag bans have been the most common approach adopted by local governments, with 95% of all ordinances banning plastic bags. Just over half of these combined a plastic bag ban with a fee levied on paper and/or reusable bags, with the most common fee set at 10¢ per bag.

Bag bans are the most the effective approach at reducing the consumption and thus generation of bags as waste. However, the banning of only one type of bag – without a fee or ban on other single use bags – can have negative unintended consequences. In 1990, Maine adopted a law that required retailers to provide a paper bag unless a customer specifically requested a plastic bag. Although there was a dramatic reduction in the number of plastic bags consumed, people who still expected an unlimited number of free bags at

checkout simply switched to paper bags. Because paper bags weigh more and cost retailers about 150% more, this law was repealed one year later primarily in response to retailer outcries – but also because municipal waste management costs increased slightly. In contrast to partial bans, fees and taxes have been very effective while maintaining consumer choice. Ireland, Australia, and Santa Barbara, California all saw an 80-90% decrease in consumption of shopping bags after instituting fees.

Issues about Bans and Fees on Single-Use Styrofoam™ Food Service Items

Although data are sparse, industry estimates place annual per capita consumption of Styrofoam™ cups, bowls, plates, clamshells, and trays at 194.2 items per person. As with single-use plastic bags, the recycling rate for Styrofoam™ is extremely low. The vast majority become litter.

As of October 2017, there were 158 local-level ordinances (covering 6.7% of the US population) designed to reduce consumption of Styrofoam™ food service items. All of the Styrofoam™ ordinances are bans of one sort or another. Some 5.6% are narrow bans in which Styrofoam™ is restricted primarily at governmental facilities and public facilities, while four-fifths are limited bans that prohibit restaurants and retailers from selling prepared food using Styrofoam™ service items. Less than 3% are full bans that include packaging such as egg cartons and produce/meat/fish trays; and just over one in ten are comprehensive bans that cover Styrofoam™ food service items, sale and use of disposable polystyrene coolers, drinking straws, and food service items such as lids along with “packing peanuts” made of polystyrene.

The Bottom Line

State and local experience and available data to date suggest that the most effective strategies for reducing waste at the local level include the following measures:

- Bans on single-use plastic bags.
- Fees for single-use plastic or paper consumer items like bags, straws, and food service items.
- Bans on Styrofoam™ food service and packing items.

Of these, across-the-board fees do the most to reduce local waste and disposal costs while being the most acceptable to consumers, because they preserve some choice and convenience.

Read more in Travis P. Wagner, “Municipal Approaches in Maine to Reduce Single-use Consumer Products,” *Maine Policy Review*, (2016), 25 (2), 31-43 and “Reducing Single-use Plastic Shopping Bags in the USA,” in *Waste Management*, (2017).