



Maryland Chapter

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Committee: Environment and Transportation
Testimony on: HB209 “Plastics and Packaging Reduction Act”
Position: Support
Hearing Date: February 11, 2020

The Maryland Chapter of the Sierra Club strongly supports HB209, the Plastics and Packaging Reduction Act, one of our priority bills in 2020. This legislation would prohibit retailers from providing plastic carryout bags at the point of sale and require them to charge at least 10 cents for paper or other carryout bags. Lastly, the bill would establish a work group to recommend further actions to reduce plastic and single-use container waste in Maryland.

The world is facing a plastic pollution crisis, and carryout bags are a major culprit. Every year, our oceans take in an estimated 5 million-13 million tons of plastic from land-based sources.¹ Plastic bags are among the top five plastic products collected in beach cleanups in the U.S.² Lightweight and picked up by a breeze, littered plastic carryout bags are blown or washed into waterways and the oceans, where they degrade into small pieces, absorbing toxic chemicals. Intact, or as microplastic particles, the bags are ingested by marine life, injuring and killing fish, seabirds, and marine mammals.³ On land, plastic bag litter blows far and wide until it is snagged by a tree or a fence. It can be lethal if ingested by livestock or wildlife. These bags have about a 15-minute “working life,” but last for centuries or more in the environment.

Plastic bags are ubiquitous -- worldwide, in the U.S., and in Maryland. Worldwide, shoppers use an estimated one trillion plastic bags each year; about 100 billion plastic carryout bags are used annually in the U.S., or about 305 bags per capita. Marylanders are contributing nearly two billion plastic carryout bags per year to this total.⁴ Fieldwork conducted by the Sierra Club at major grocery stores in Maryland that provide free carryout bags found that 76% to 89% of shoppers use single-use bags, nearly all of them plastic (Exhibit 1A).⁵ In the Baltimore Harbor, three trash wheels have captured 673,218 plastic bags.⁶ The U.S. Environmental Protection Agency (EPA) has set Total Maximum Daily Loads (TMDLs) for trash on the Anacostia River and Baltimore Harbor, to which single-use plastic bags are a major contributor. This bill will help meet these targets by banning single-use plastic bags, and by curbing the use of paper bags by requiring stores to charge for them.

Increased recycling of plastic bags cannot solve this problem. Only about 5% of plastic bags are recycled, according to the EPA. They are not accepted in curbside recycling programs because they foul the machinery and are too contaminated to be marketed. Removing the plastic film from the recycling screens at the Prince George’s County Materials Recovery Facility (MRF) is costing the facility upward of \$124,800 per year, by one estimate (Exhibit 2). The bags that are not recycled are landfilled,

¹ Jambeck, Jenna *et al.* 2015. “Plastic waste inputs from land into the ocean,” *Science* 347, no. 6223: 768-771.

² 5 Gyres Institute *et al.* Undated. “Better Alternatives Now: B.A.N. List 2.0”. Los Angeles, California.

³ “The Problem of Marine Plastic Pollution”: <https://www.cleanwater.org/problem-marine-plastic-pollution>

⁴ Maryland’s estimated 2020 population of 6.08 million x 305 bags/person.

⁵ Maryland Sierra Club Shopper Survey, 2019. With the help of over 100 volunteers from the Sierra Club, Less Plastic Please, and Plastic-Free QAC, the carryout bag choices of more than 34,000 shoppers in 214 stores were observed in six counties (Frederick, Howard, Montgomery, Prince George’s, Queen Anne’s, Washington) and the City of Baltimore.

⁶ www.mrtrashwheel.com

incinerated, or littered. Even if the recycling rate could be improved, it would not prevent littered plastic bags from entering the environment.

The best solution is to reduce our use of single-use plastic bags by banning them statewide and incentivizing the use of reusable bags. Eight states and nearly 500 localities in the U.S. have enacted carryout bag laws.⁷ Locally, this includes Montgomery County (with a 5-cent tax on plastic and paper carryout bags since 2012), the City of Baltimore (with a ban on plastic carryout bags and a 5-cent surcharge on paper bags to go into effect next year), Howard County (with a 5-cent tax on plastic bags to go into effect this fall), and the towns of Chestertown, Takoma Park, and Westminster, with plastic bag bans.

Plastic bag ban and fee laws are effective in changing shopper behavior and reducing plastic pollution. Studies have documented substantial reductions in disposable bag use and increases in reusable or no bag use associated with bag fee and bag ban policies (Exhibit 3). Montgomery County's 5-cent tax on plastic and paper carryout bags has cut the percentage of shoppers using single-use plastic bags by more than half, compared with adjacent Prince George's County without a fee (Exhibit 1B). Although plastic bags still account for nearly all of the disposable bags used in Montgomery County, nearly 60% of shoppers are opting for reusable bags or no bag at all, compared with only 12% in Prince George's County.

This bill would reduce disposable bag use even further in Montgomery County and other jurisdictions by banning single-use plastic bags altogether and requiring that retailers charge at least 10 cents for paper and other reusable bags. The Aldi and Lidl grocery chains closely approximate that model: they do not offer single-use plastic carryout bags and charge for all other carryout bags, including paper bags (7¢) and low-end reusable plastic bags (10¢). At these chains in Maryland, disposable bag use is dramatically reduced to 6% or less (Exhibit 1C); roughly half to three-quarters of their shoppers bring reusable bags and 28%-46% use no bag at all.

Several features of this legislation are particularly important in maximizing its effectiveness.

- **Requiring retailers to charge at least 10 cents for paper and other bags is a critical incentive for shoppers to favor reusable bags or no bag over single-use paper bags.** A straight ban on plastic bags without this incentive would dramatically increase use of "free" paper bags. For example, Westport, Connecticut's ban on single-use plastic bags with no charge for paper bags sent the share of shoppers using paper bags from nearly none to 45%, with only 2% of shoppers using no bag.⁸ Paper bags are another single-use product with heavy upstream environmental impacts. They also cost retailers more to provide: paper carryout bags cost 6-10 cents, compared to 1-3 cents for plastic carryout bags. A large increase in the use of "free" paper bags by consumers could dramatically drive up retailers' overhead and prices. The objective of the bag policy is to have shoppers use reusable bags, not another single-use item with environmental impacts and that also is littered.⁹
- **Adoption of a minimum 4 mils thickness standard for defining a reusable bag is important to avoid a workaround of the policy by the plastics industry and retailers.** California, the first state to enact a statewide ban, used a minimum thickness of 2.25 mils to define reusable bags (among other

⁷ CA, OR, NY, VT, ME, CT, and DE have statewide bag laws; HI has a de facto statewide law because all counties have adopted ordinances. Source: www.PlasticBagLaws.org

⁸ David Brown. 2010. "Retail Checkout Bag Surveys Report, Westport Connecticut," cited in Surfrider Foundation, 2019. *Plastic Bag Law Activist Toolkit*.

⁹ For these reasons, the Surfrider Foundation's *Plastic Bag Law Activist Toolkit* discourages plastic bag bans that don't also involve some charge to the consumer for paper bags and other alternatives.

criteria). These relatively thin “reusable” bags, which must also be capable of 125 uses, are sold for 10 cents. However, they often are thrown away after only one or a few transactions.¹⁰ The higher standard of a minimum 4 mils thickness for reusable bags has been adopted by statewide bills in Connecticut, Maine, and Oregon and is the standard in the recently-passed Baltimore bag bill.

Finally, the requirement that retailers essentially sell paper carryout and reusable bags for at least 10 cents is a more transparent and fairer way of financing them. There is no such thing as a “free” carryout bag. They are a significant expense for retailers, incorporated into their overhead and thus embedded in the price of merchandise.¹¹ Shoppers already are financing these costs in their grocery bills, whether they bring a reusable bag or not. In requiring retailers to sell these bags, only the purchaser pays; other shoppers are not footing the bill, it’s less costly for the retailer, and can lead to downward pressure on prices.¹² The bill removes a hidden cost, and this cost can be completely avoided by bringing one’s own bag.

In conclusion, single-use plastic carryout bags are used for a very short time and stay in the environment forever. They are particularly harmful to the marine environment. This bill will significantly reduce the overall use of plastic carryout bags, minimize a possible increase in use of paper bags, and result in markedly less plastic bag litter on land, in the streams, and in the oceans. It will improve the transparency of the cost of carryout bags, and shoppers can avoid buying a bag by bringing one. We urge you to act favorably on this important legislation.

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Exhibits

1. Results of the 2019 Maryland Sierra Club Shopper Survey
 - 1A. When single-use carryout bags are provided “free” at checkout, three-quarters or more of shoppers take them
 - 1B. Montgomery County’s bag fee incentivizes shoppers to use reusable bags or no bag
 - 1C. When thin plastic bags aren’t available and other bags cost, almost everyone brings a bag or takes no bag at all
2. The cost of plastic bag contamination at Prince George’s County’s single-stream recycling facility
3. The effectiveness of carryout bag bans and fees in the United States

¹⁰ Gardiner, Dustin. 2019. “California banned plastic bags. So why do stores keep using them?” *San Francisco Chronicle*. These same thin 10-cent “reusable” bags are also found in Maryland stores (Aldi, Lidl, Giant, Weis Markets, for example). They would be banned under HB 209, because they are less than 4 mils.

¹¹ Store owners who participated in research by Taylor and Villas-Boas (2015, “Bans versus Fees: Disposable Carryout Bag Policies and Bag Usage”) reported the cost of disposable bags as the fourth largest component of overhead, after electricity, payroll, and credit card fees.

¹² Those who might try to characterize this arrangement as a tax would be wrong – a tax would be an additional expense, on top of the cost of the bag. There is no tax or fee in this bill.

Exhibit 1. Results of the 2019 Maryland Sierra Club Shopper Survey

Exhibit 1A. When single-use (“disposable”) carryout bags are provided “free” at checkout, three-quarters or more of shoppers take them

The Maryland Sierra Club Shopper Survey recorded the bag choices of shoppers exiting all of the stores in the major grocery store chains distributing free carryout bags in each jurisdiction. In the six jurisdictions (below) that did not have a bag fee or ban, 76%-89% of shoppers took exclusively free disposable bags. Among the shoppers who took disposable bags, more than 98% in all six jurisdictions took single-use plastic bags.

Distribution of shoppers according to their carryout bag choices

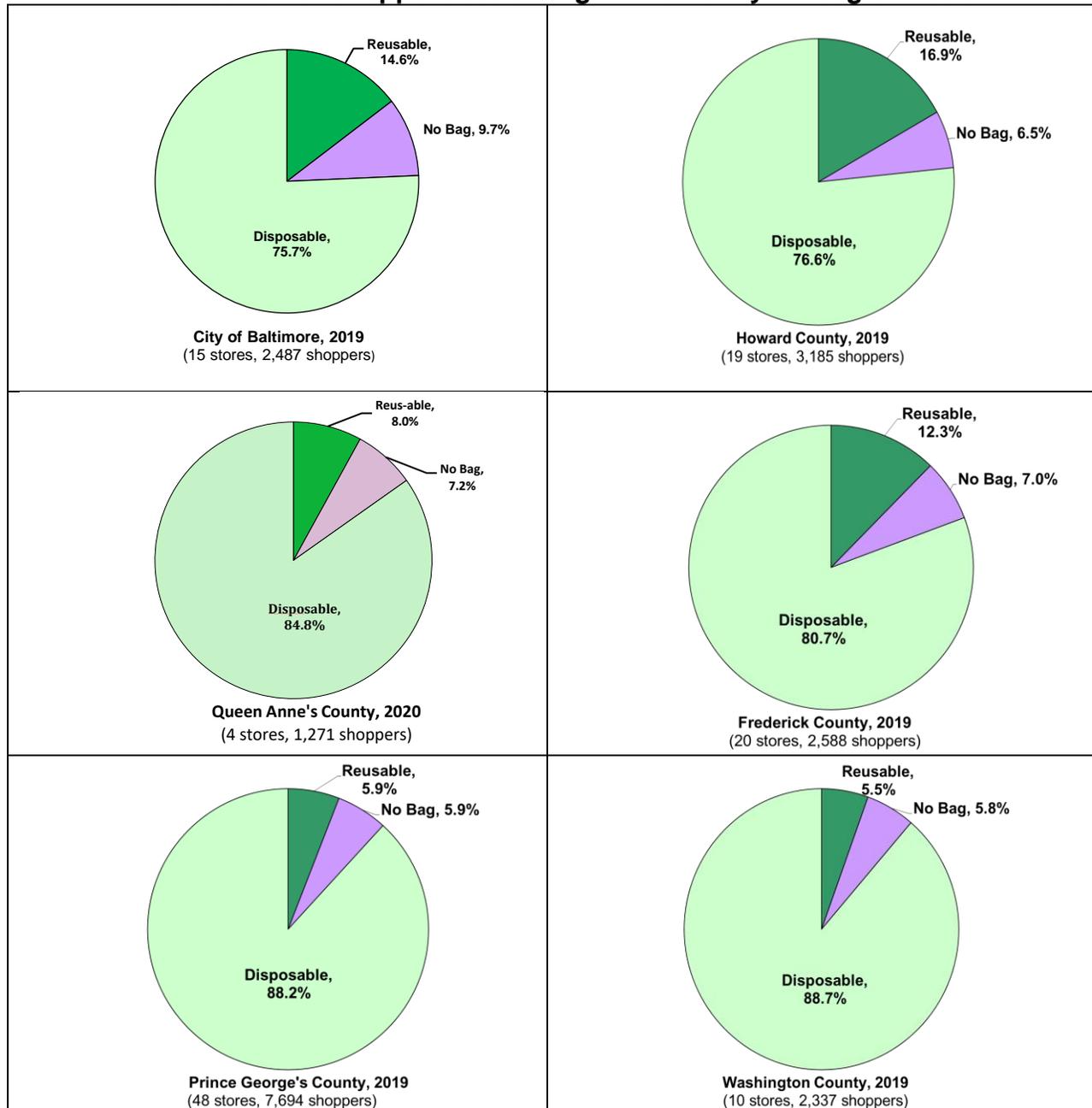
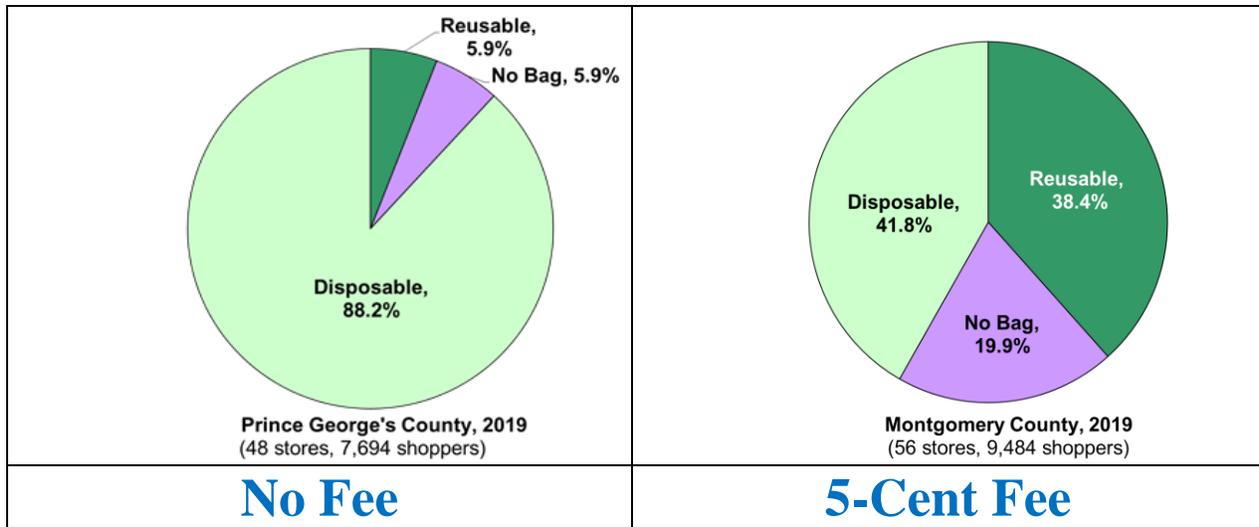


Exhibit 1B. Montgomery County’s bag fee incentivizes shoppers to use reusable bags or no bag

Montgomery County, Maryland, imposed a 5-cent tax on all plastic and paper carryout bags that went into effect in 2012. Seven years later, the results of the Maryland Sierra Club’s 2019 Shopper Survey show that there’s still a strong incentive for grocery shoppers to bring a reusable bag or not to use a bag at all, compared with neighboring Prince George’s County, where there is no bag legislation.

- The share of shoppers using single-use bags (nearly all of them plastic) is less than half (41.8%) that of neighboring Prince George’s County (88.2%) and the share with no bag (19.9%) is triple the share in Prince George’s (5.9%). The share of Montgomery shoppers with a reusable bag (38.4%) is six times higher than in Prince George’s (5.9%). Overall, 60% of grocery shoppers in Montgomery County are avoiding the fee by bringing a reusable bag or not taking a bag.¹³
- While the survey was not able to count the number of bags used, research elsewhere has found that the number of disposable bags used among those who take them also declines in the presence of a charge, fee, or tax.¹⁴

Distribution of shoppers according to their carryout bag choices



¹³ This result is consistent with T. Homonoff’s research on the impact of Montgomery County’s bag tax, based on observing shoppers at stores before and after the imposition of the fee in 2012, and comparing it with stores in Washington, D.C. (which had imposed a similar bag tax two years earlier) and in Northern Virginia (with no bag tax). She estimated that the share of grocery shoppers who used at least one disposable bag dropped from 82% to 40%, while the share that brought a reusable bag rose from 16% to 49% immediately after the tax went into effect. In addition, those who continued using disposable bags used an average of one less bag per shopping trip. T.A. Homonoff. 2013. “Can Small Incentives Have Large Effects? The Impact of Taxes vs. Bonuses on Disposable Bag Use.” Princeton University Industrial Relations Section Working Paper #575.

¹⁴ Homonoff, T., L. Kao, D. Palmer, C. Soybolt. 2018. “Skipping the Bag: Assessing the impact of Chicago’s tax on disposable bags.” New York University|Wagner and Ideas42. September. Taylor, R. and S. B. Villas-Boas. 2015. “Bans versus Fees: Disposable Carryout Bag Policies and Bag Usage.” Selected paper prepared for presentation at the 2015 Agricultural & Applied Economics Association and Western Agricultural Economics Association Annual Meeting, San Francisco, CA, July 26-28.

Exhibit 1C. When single-use plastic bags are unavailable and other bags must be purchased, almost everyone brings a bag or takes no bag at all

While at present there are no jurisdictions in Maryland that have adopted a “hybrid” bag ban – one with both a plastic bag ban and a cost to the consumer for other bags – the Aldi and Lidl grocery chains have incorporated these principles into their business model. All carryout bags must be purchased and they do not offer single-use plastic carryout bags for sale. Paper carryout bags are sold for 7 cents, the cheapest reusable bag is plastic and sold for 10 cents. Other more durable reusable bags sell for 89 cents, 99 cents, or more.

The Maryland Sierra Club Shopper Survey monitored 20 stores in the Aldi and Lidl chains and found very high levels of reusable bag use (48%-72%), as well as use of no bag (28%-46%). Only 6% or fewer shoppers presented with a disposable bag, and almost all were paper.

Distribution of shoppers according to their carryout bag choices

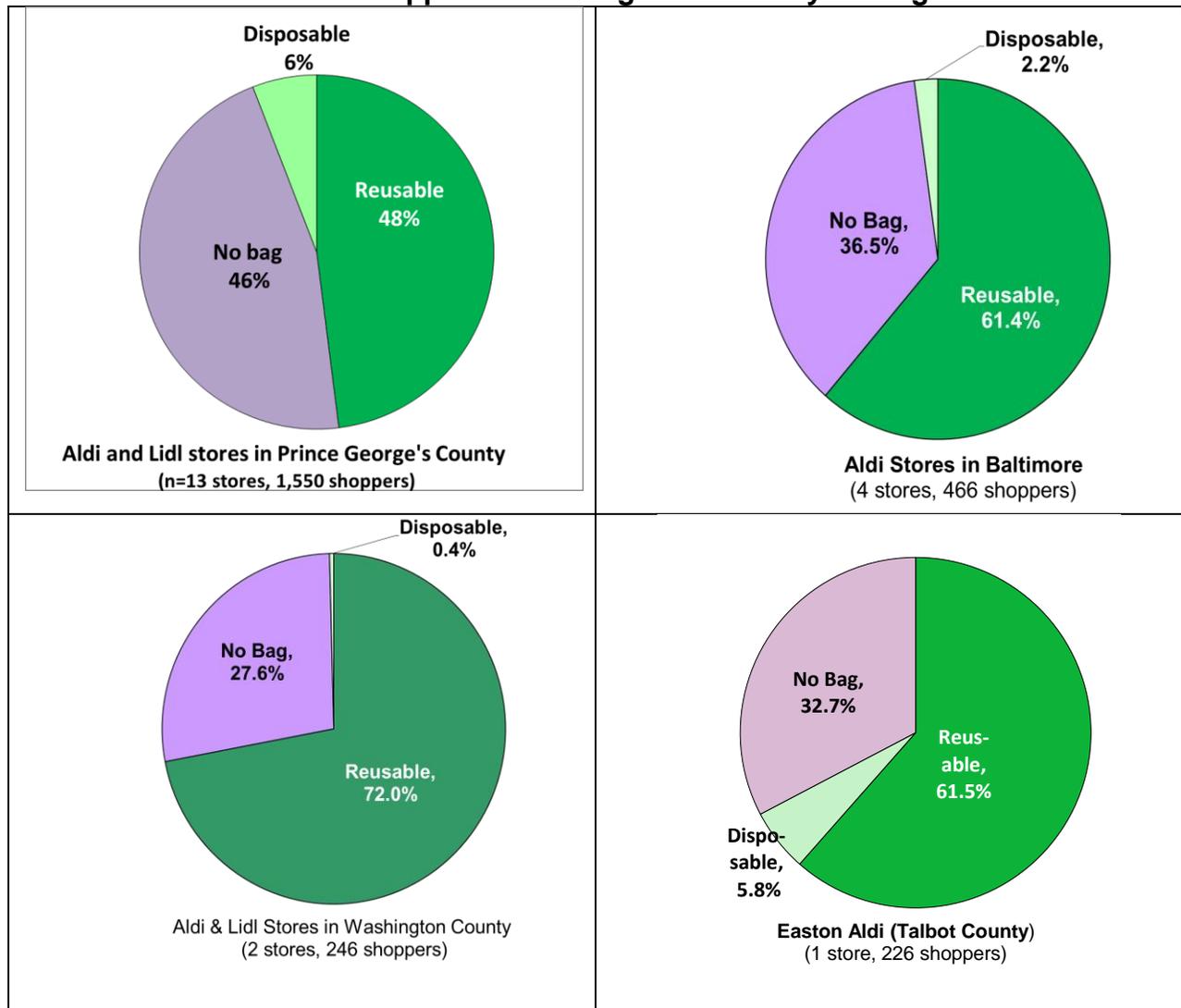


Exhibit 2. The cost of plastic bag contamination at Prince George’s County’s single-stream recycling facility

The Prince George’s County Materials Recovery Facility (MRF) in Capitol Heights, Maryland, no longer attempts to recycle plastic bags because of their costly impact on the sorting machinery and the lack of a market for the highly contaminated product collected in the single-stream process. However, residents continue to put plastic bags in their curbside bins, and plastic bags and film continue to foul the equipment. The plastic bags that are captured at the MRF are landfilled.

How much is this costing Prince George’s County? Every day after the last shift, three workers spend 8 hours each cleaning plastic film from the sorting screens. The photos below show the impact on the sorting equipment as of the end of a shift (left) and the equipment after it is cleaned (right). At \$20/hour, five days a week, 52 weeks per year, the cost to the facility of cleaning plastic bags from the equipment is at least \$124,800 annually because of plastic bag and film contamination.

Plastic film fouling at the end of the day



The screens after cleaning

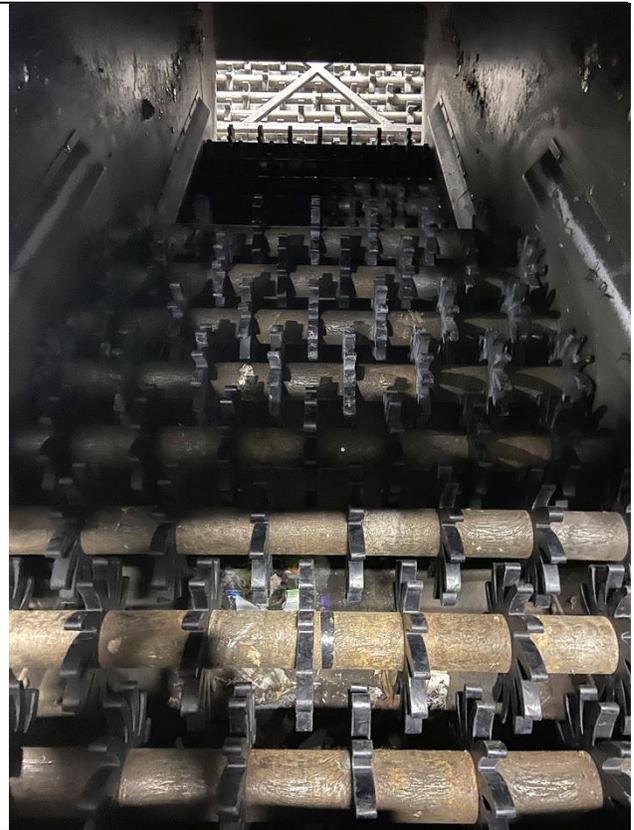


Exhibit 3. The effectiveness of selected carryout bag bans and fees in the US

- In **Chicago, Illinois**, following the imposition of a 7-cent bag tax in February 2017, the share of shoppers using any disposable bag dropped from 82% to 54%, reusable bag use more than doubled, from 13% to 28.5%, and the likelihood of using no bag rose from 8% to 21%. The number of disposable bags used per trip dropped from 2.3 to 1.8.¹⁵
- In 2012, **Aspen, Colorado**, banned single-use plastic carryout bags at supermarkets and required the stores to charge 20 cents for single-use paper bags. Five years later, 40% of shoppers were using reusable bags, 45% were carrying out their merchandise without a bag, and 15% purchased the 20-cent paper bags. In contrast, at a grocery store in nearby El Jebel outside the city limits and with no bag policy, only 16% of shoppers used reusable bags, 7.5% exited with unbagged groceries, and a whopping 76.5% had single-use bags.¹⁶
- In a pilot at grocery stores in **Corning and Ithaca, New York**, the Wegmans chain banned plastic single-use bags and charged 5 cents for paper bags. While about 20% of shoppers at all Wegmans stores use reusable bags, at the pilot stores with a ban/fee structure only 20% used single-use bags.¹⁷
- In **San Jose, California**, a ban on thin plastic bags and a 10-cent fee on paper bags increased shoppers' reliance on reusable bags from 3% to 46%, and the no-bag share from 13% to 43%.¹⁸ Plastic bags in waterways declined by 76% and plastic bag pollution in storm drains declined by 69%.

¹⁵ Homonoff, T., L. Kao, D. Palmer, C. Soybolt. 2018. "Skipping the Bag: Assessing the impact of Chicago's tax on disposable bags." New York University|Wagner and Ideas42. September.

¹⁶ Armstrong, A., and E. O'Connell Chapman. 2017. "City of Aspen Single Use Bag Study." *Journal of Sustainability Education* 16, December.

¹⁷ "Wegmans Announces Date for Elimination of Plastic Bags in All New York State Stores." Press release, Rochester, NY, January 6, 2020.

¹⁸ <https://www.sanjoseca.gov/your-government/environment/illegal-dumping-litter/bring-your-own-bag-ordinance>