



Maryland Chapter

7338 Baltimore Avenue, Suite 102
College Park, MD 20740-3211

Committee: Environment and Transportation
Testimony on: HB314, Plastic Bag Reduction Act
Position: Support
Hearing Date: January 28, 2021

The Maryland Chapter of the Sierra Club strongly supports HB314, the Plastic Bag Reduction Act, one of our priority bills in 2021. This legislation would prohibit retailers from providing plastic carryout bags at the point of sale, as of July 1, 2022. The bill would not affect the authority of jurisdictions to collect an already enacted fee or tax on carryout bags not banned by the bill.

The world is facing a plastic pollution crisis, and carryout bags are a major culprit. Every year, our oceans take in an estimated 15 million tons of plastics.¹ Plastic bags are among the top five plastic products collected in beach cleanups in the U.S.² Littered plastic carryout bags are blown or washed into waterways and the oceans, where they degrade into small pieces and absorb 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. According to scientists, we may be ingesting up to a credit card's worth of plastic *every week*.⁴ These bags have about a 15-minute "working life," but last for centuries or more in the environment.

Worldwide, shoppers use an estimated one trillion plastic bags each year. About 100 billion plastic carryout bags are used annually in the U.S., roughly 305 bags per capita. Marylanders are thus contributing nearly two billion plastic carryout bags per year to this total.⁵ Fieldwork conducted by the Sierra Club and partners at Maryland grocery stores that provide free carryout bags found that 76% to 92% of shoppers use them, and nearly all bags are plastic (Exhibit 1, left column).⁶ In Baltimore Harbor, three trash wheels have captured 755,558 plastic grocery bags.⁷ 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 carryout bags.

Increased recycling 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

¹ Forrest, Andrew *et al.* 2019. "Eliminating Plastic Pollution: How a Voluntary Contribution from Industry Will Drive the Circular Plastics Economy," *Frontiers in Marine Science* 6:627, September 25, 2019. "Supplementary Materials."

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 "How to Eat Less Plastic," *Consumer Reports*, June 2020.

⁵ Maryland's estimated 2020 population of 6.08 million x 305 bags/person.

⁶ Maryland Sierra Club Shopper Surveys, 2019-2020. With the help of over 120 volunteers from the Sierra Club, Less Plastic Please, Ocean City Surfrider, and Plastic-Free QAC, the carryout bag choices of more than 40,000 shoppers in 256 stores were observed in 13 counties (Calvert, Charles, Dorchester, Frederick, Howard, Montgomery, Prince George's, Queen Anne's, St. Mary's, Somerset, Washington, Wicomico, and Worcester) and the City of Baltimore. Results are presented in Exhibit 1, annexed.

⁷ www.mrtrashwheel.com

Founded in 1892, the Sierra Club is America's oldest and largest grassroots environmental organization. The Maryland Chapter has over 75,000 members and supporters, and the Sierra Club nationwide has over 800,000 members and nearly four million supporters.

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

We can substantially reduce our use of single-use plastic bags by banning them statewide and incentivizing the use of reusable bags. Ten states and nearly 500 localities in the U.S. have enacted carryout bag laws, including neighboring Delaware, which banned plastic carryout bags as of January 1, 2021.⁸ Locally, Montgomery County has a 5-cent tax on plastic and paper carryout bags since 2012; the City of Baltimore has a ban on plastic carryout bags and a 5-cent surcharge on paper bags to go into effect in 2021; Howard County has a 5-cent fee on plastic bags in effect since October 1, 2020, and the towns of Chestertown, Takoma Park, and Westminster have 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.⁹ 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 3). Nearly 60% of shoppers are opting for reusable bags or no bag at all, compared with only 12% in Prince George's County. As a result of Howard County's 5-cent fee on plastic carryout bags, half of shoppers are now using reusable bags or no bag, and the share using plastic had been cut by more than half.

This bill would ban single-use plastic carryout bags altogether, incentivizing the use of reusable bags or no bag at all. To further incentivize shoppers to switch to reusable bags for an even larger impact, retailers should consider charging for bags provided at checkout, just as they do for other merchandise. Sierra Club's fieldwork at Aldi and Lidl grocery chains that do not offer plastic carryout bags and charge for paper bags (7¢) and reusable plastic bags of various quality (10¢ or more) 85%-99% of shoppers bring reusable bags or take no bag at all (Exhibit 1, second column). This is a more transparent and equitable policy: only shoppers who take a bag pay for it, other shoppers are not footing the cost of "free" bags embedded in the store's overhead that they aren't using.

In sum, 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 and now even threaten human health. By banning them statewide, this bill will incentivize the use of reusable bags or no bag and result in substantially less plastic bag litter on land, in the streams, and in the oceans. We need to enact this bill now so we can say goodbye to plastic bags in July 2022! **Every year that we wait, another 2 billion single-use plastic carryout bags are being released into the environment.** We respectfully request a favorable report on HB 314.

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⁸ CA, CT, DE, ME, NJ, NY, OR, VT, and WA have statewide bag laws; HI has a de facto statewide law because all counties have adopted ordinances. Source: www.PlasticBagLaws.org

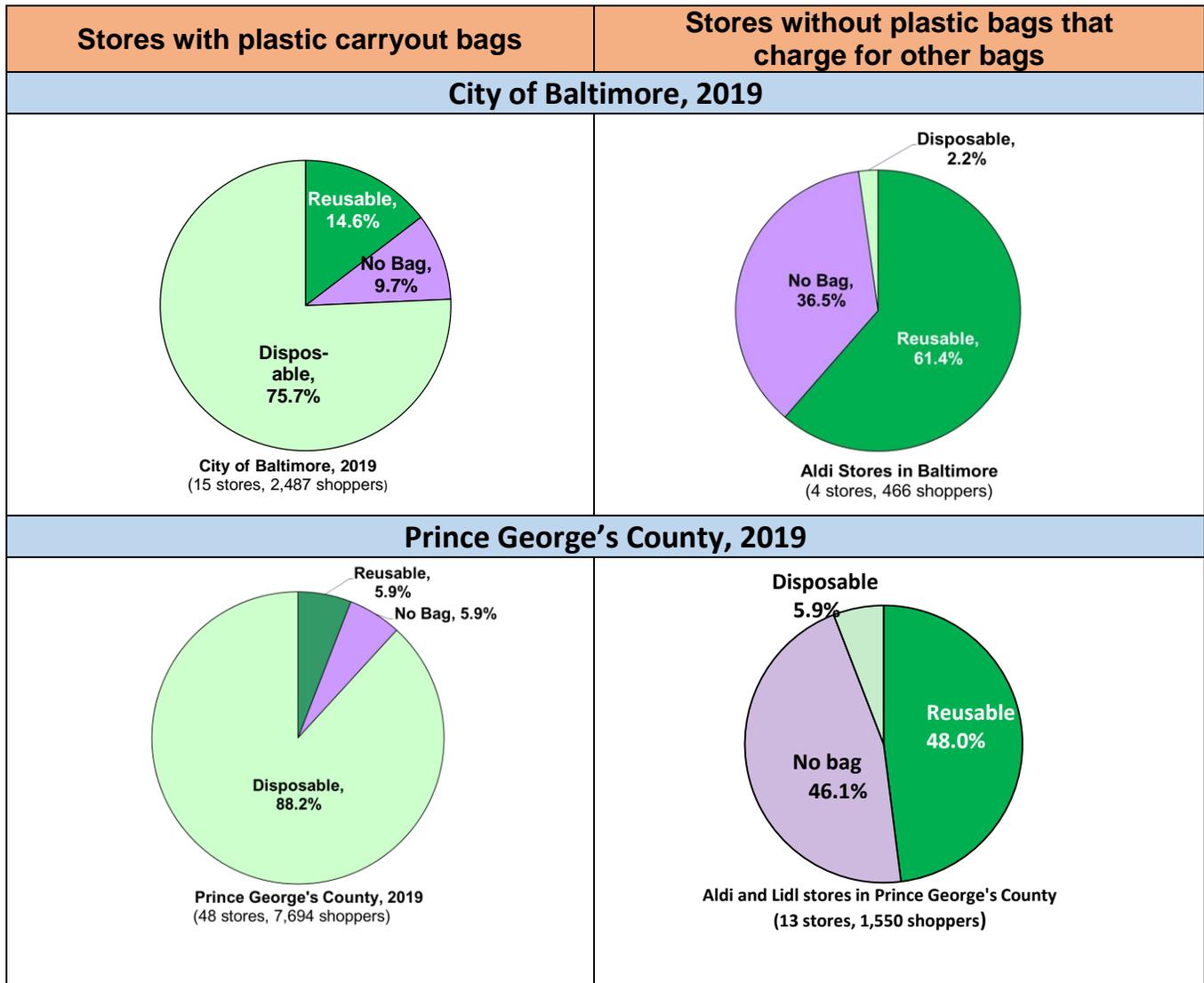
⁹ Homonoff, T. *et al.* 2018. "Skipping the Bag: Assessing the impact of Chicago's tax on disposable bags." New York University|Wagner and Ideas42, September. Armstrong, A. and E. O'Connell Chapman. 2017. "City of Aspen Single Use Bag Study." *Journal of Sustainability Education* 16, December. "Wegmans Announces Date for Elimination of Plastic Bags in All New York State Stores." Press release, Rochester, NY, January 6, 2020. For San Jose, California, see: <https://www.sanjoseca.gov/your-government/environment/illegal-dumping-litter/bring-your-own-bag-ordinance>

Exhibit 1. Results of the 2019-2020 Maryland Sierra Club Shopper Surveys

The Maryland Sierra Club Shopper Surveys conducted in 2019-2020 recorded the bag choices of shoppers exiting all of the stores in major grocery store chains in 13 Maryland counties and the City of Baltimore. Each store exit was monitored for one hour (for counties with many stores) or two hours (for counties with few stores) on a weekend shopping day. Altogether, the bag choices of nearly 40,000 shoppers were observed.

Below, for the 11 jurisdictions that did not have a bag fee or a ban, shoppers' bag choices are compared for two types of stores: (a) those that provided free single-use carryout bags (plastic or paper;) and (b) those that did not provide single-use plastic carryout bags and charged for other bags (paper and reusable).

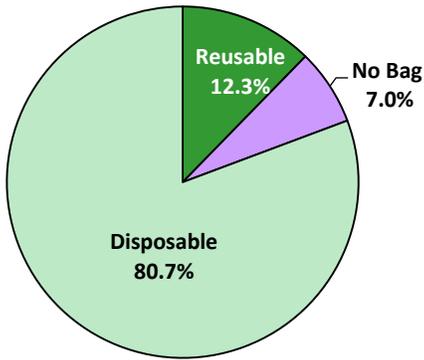
- In most of the chains that provided free carryout bags, paper bags in principle were offered but often were not viewable or accessible. Seventy-six percent to 92% of shoppers took exclusively free disposable bags; overwhelmingly (98% or more) these were plastic carryout bags.
- In chains that did not provide plastic carryout bags and charged for paper and reusable bags, 85% - 99% brought their own bag or used no bag at all. Virtually all disposable bags were paper bags.



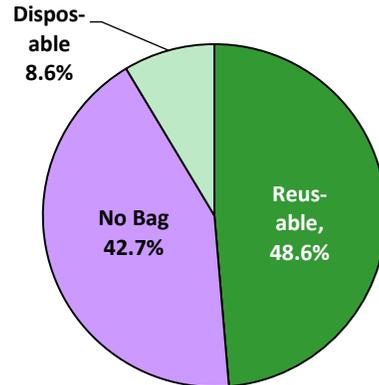
Stores with plastic carryout bags

Stores without plastic bags that charge for other bags

Frederick County, 2019

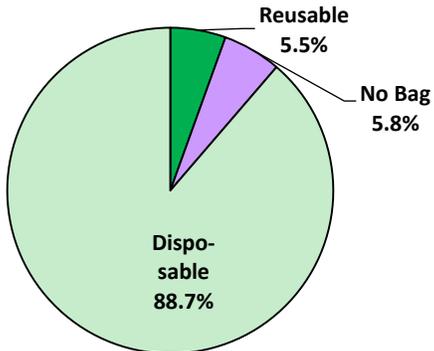


Frederick County
(20 stores, 2,588 shoppers)

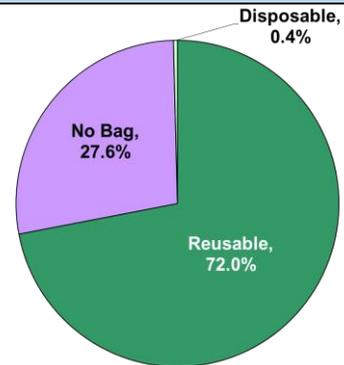


Aldi (Frederick County)
(2 stores, 220 shoppers)

Washington County, 2019

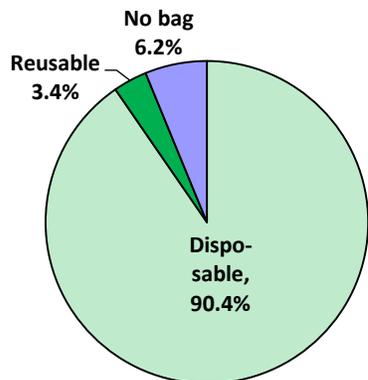


Washington County
(10 stores, 2,337 shoppers)

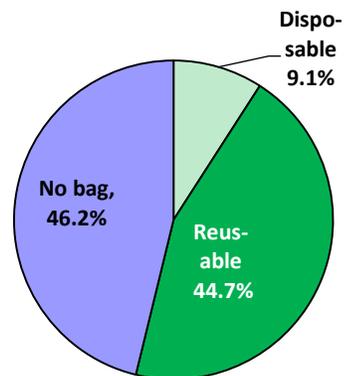


Aldi & Lidl Stores in Washington County
(2 stores, 246 shoppers)

Southern Maryland, 2020



Calvert, Charles,
St. Mary's Counties
(24 stores, 3,193 shoppers)

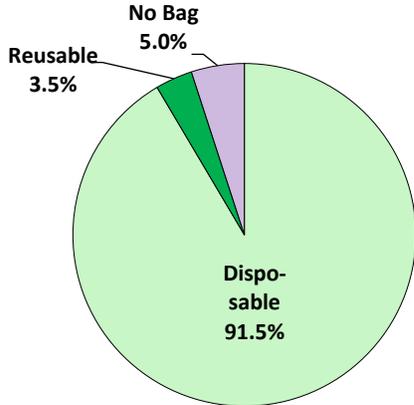


Aldi & Lidl stores
Charles & St. Mary's Counties
(3 stores, 340 shoppers)

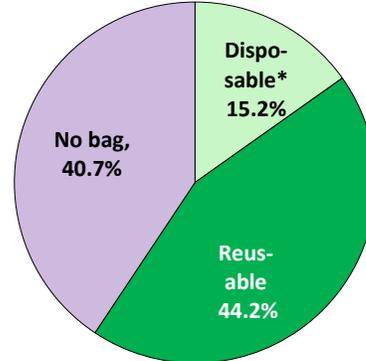
Stores with plastic carryout bags

Stores without plastic bags that charge for other bags

Lower Eastern Shore, 2020

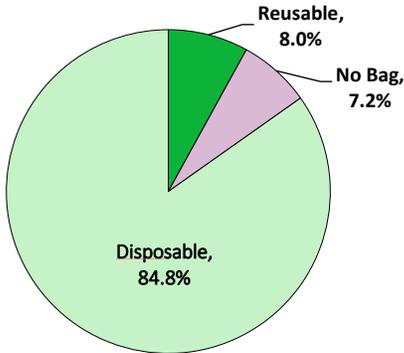


Dorchester, Somerset, Wicomico, Worcester Counties
(13 stores, 2,800 shoppers)

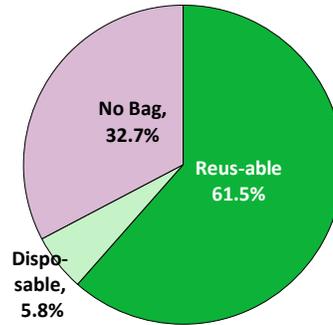


Aldi & Save-A-Lot
Wicomico County
(2 stores, 231 shoppers)

Queen Anne's County, 2020



Queen Anne's County, 2020
(4 stores, 1,271 shoppers)



Easton Aldi (Talbot County)
(1 store, 226 shoppers)

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



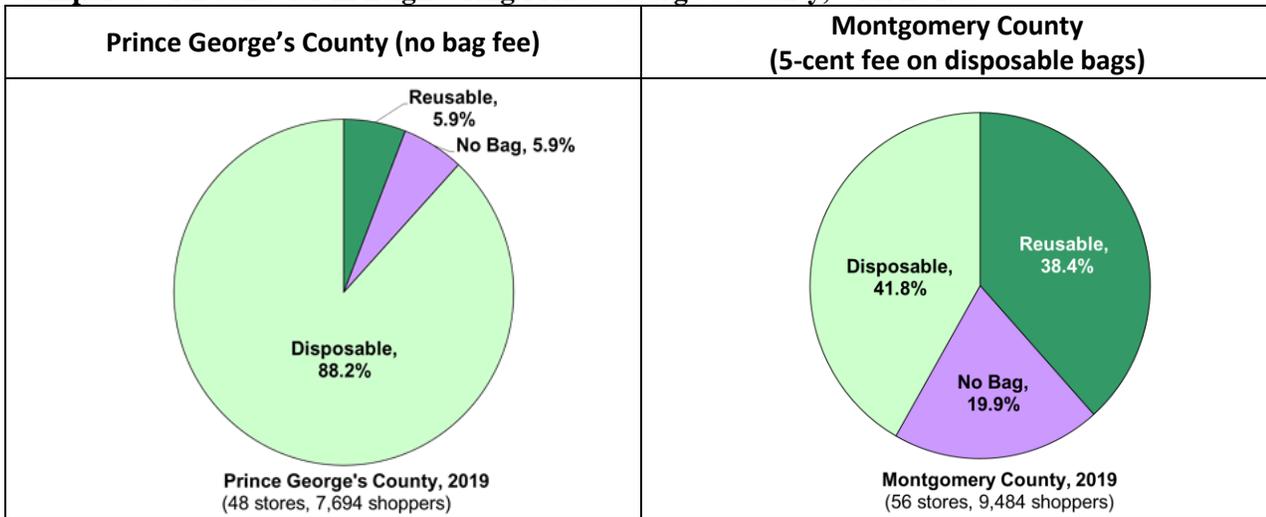
The screens after cleaning



Exhibit 3. Bag fees in Howard and Montgomery Counties incentivize shoppers to use reusable bags or no bag

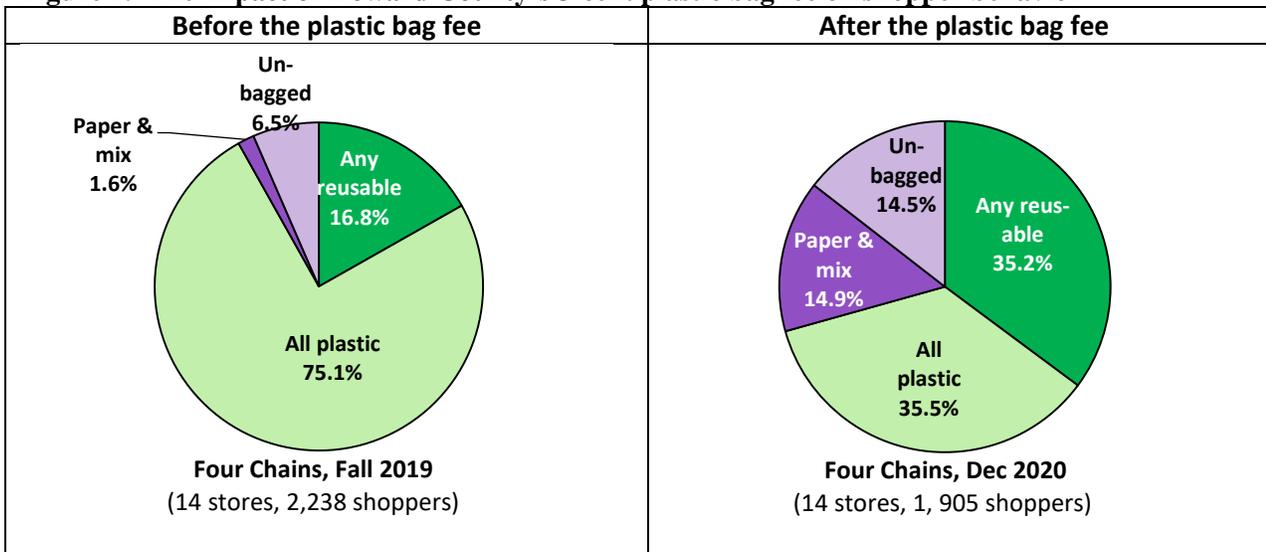
Montgomery County has had a 5-cent fee on plastic and paper carryout bags since 2012. Seven years later, there was still a strong incentive for shoppers to bring a reusable bag or no bag, compared with neighboring Prince George’s County, with no bag fee (Figure 1). Howard County’s 5-cent fee on plastic carryout bags went into effect on October 1, 2020. The share of shoppers using reusable bags or no bag in four grocery chains (Food Lion, Giant, Harris Teeter, Safeway) has increased from a quarter to half, and the share using plastic has declined from three-quarters to about a third (Figure 2).

Figure 1. Shopper behavior in Montgomery County, with a 5-cent fee on paper and plastic carryout bags, compared with behavior in neighboring Prince George’s County, with no fee



Note: Percent of shoppers using different bag types. “Disposable”= Plastic and/or paper bags only.
 Source: Maryland Sierra Club Shopper Survey, 2019

Figure 2. The impact of Howard County’s 5-cent plastic bag fee on shopper behavior



Note: The percent of shoppers using different bag types. “Paper & mix”= all paper bags or mix of paper and plastic bags. The same stores were surveyed in 2019 & 2020. Source: Maryland Sierra Club Shopper Surveys, 2019-2020