

Plastic Bag Alternatives Much More Costly to Consumers

WHAT PLASTIC BAG BAN PROPONENTS DO NOT WANT YOU TO KNOW!

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A plastic bag ban forces consumers to use alternative methods for transporting their purchases home. It turns out that all of these methods are much more costly and time consuming than the plastic carryout bags supplied by retail stores.

A plastic bag ban normally involves a ban on plastic carryout bags and a fee of 10 or 25-cents on paper bags. The fee is intended to coerce shoppers to purchase and use reusable shopping bags.

At the present time, large retail stores pay less than 2-cents each for plastic carryout bags in bulk quantities. So a typical family that uses about 20 plastic carryout bags per week, or 1040 bags per year at 2-cents each, would cost retail stores approximately \$20.80 per year. Of course, the customer pays for those bags through higher retail prices.

When living under a bag ban, shoppers have several options for transporting purchased goods home from the store. This paper will review those options that shoppers have at their disposal after a bag ban takes effect and compares the impacts of and the estimated costs associated with each option.

Bag Options Under A Plastic Bag Ban

Self-Purchased Plastic Bags

Shoppers could purchase their own plastic carryout bags. We assume, as stated above, that a typical family could use up to 20 bags per week, or about a 1000 bags per year. A box of 1000 T-shirt bags can be purchased for about \$25 or about 2.5-cents each. By keeping the bags in the car, shoppers will always have bags with them. However, the shopper must spend additional time to manage bags; for example, to get bags out of the car prior to shopping, restocking unused bags back into the car, or (worst case) forgetting to take the bags into the store and then having to make an additional trip back to the car. This is estimated to take 2 minutes per week for a total of 104 minutes per year. With a person's time valued at \$12 per hour¹ this works out to \$20.80 per year. Total cost for this option is therefore \$45.80 per year.

Store-Purchased Paper Bags

If the family chooses to use paper bags, they will be available for purchase from the store at 10-cents or

25-cents each as specified by the local ordinance. Since paper bags hold more, we can assume 15 paper bags per week. That means the family would pay \$78 per year for paper bags at 10-cents each or \$195 per year at 25-cents each.

The paper bag cost could be reduced if some of the bags were reused, although that would require additional time and effort to inspect, fold, and put the bags in the car. This would be more worthwhile if the bag fee is 25-cents per paper bag.

Durable Machine-Washable Reusable Bags

If the family chooses to use durable machine washable reusable bags that are dryer safe, the cost for each bag is approximately \$6.00. A two-car family should have at least 8 bags per car for a total of 16 bags. The family will pay \$96 total for the bags or \$48 per year assuming a two year lifespan. However, this option will require complete bag handling and management time which includes basic bag handling (2 minutes per week as noted previously) plus time to inspect each bag after use, refold all the bags, and redistribute and restock the car(s). Complete bag handling is estimated at 5 minutes per week or 260 minutes per year at \$12 per hour or \$52 per year. On top of that, time and labor to clean out dirty bags, spot clean if needed, run the bags through the washing machine and dryer, refolding and restocking the bags, and managing the cleaned bags on a monthly basis is estimated to be about 12 hours per year at \$12.00 per hour, or \$144 per year. In addition, the cost of machine washing and drying the reusable bags once per month will add as much as \$18 per year to utility bills. Total cost for this option is \$262 per year.

Cheap Reusable Bags

If the family chooses to use the cheaper reusable bags, the cost is about \$2 each. A family should have at least 8 bags per car or 16 bags total costing \$32. The cheap reusable bags will likely have a 1 year lifespan. However, these cheaper bags must be hand washed and hung up to dry. Washing the bags in the sink usually involves letting the bags soak in a solution of soap and bleach to kill bacteria. The process is a nuisance and could take as much as one and a half hours per month. Over the course of one year, this takes 18 hours of personal time valued at \$12.00 per hour, or \$216 per year. This option still requires full bag handling as noted previously to use, inspect, refold, and restock bags. This is estimated at 5 minutes per week or 260 minutes per year at \$12 per hour or \$52 per year. Total cost for this option is \$300 per year.

All of the options discussed above are summarized in Table 1 to provide a clear comparison of costs associated with complying with a bag ban.

Other Considerations

In addition to the time consuming efforts of managing reusable shopping bags, health hazards associated with bacterial cross contamination of food products should also be considered including protocols that call for segregation of food products and the use of dedicated bags. These protocols make packing reusable bags much more time consuming and confusing.

Any bag that is reused, even if inspected, has a higher risk of contamination. The safest option is to use bags that are used only once to carry groceries, while the more risky option is to use bags that are reused, often multiple times and sometimes months between washes.

Table 1. Plastic, Paper, and Reusable Bag Option Costs

Bag Type	Strategy	Annual Purchase Costs	Annual Bag Handling cost	Annual Cleaning Cost	Total Cost per Year
PRE-BAN: Disposable Plastic Bag (Store Supplied)	Stores supply plastic carryout bags at less than 2 cents each for free. 20 bags per week or 1040 bags per year.	(\$20.80 paid for by the store and added to store retail prices)	None	None	\$20.80
Disposable Plastic Bag (Shopper supplied)	Purchase Plastic Carryout Bags – 20 bags per week or 1040 bags per year.	1000 bags for \$25.00	Basic Bag Handling - \$20.80	None	\$45.80
Purchased Paper Bag	Purchase Paper Bags – 15 paper bags per week at 10 cents each.	\$78.00	None	None	\$78.00
Purchased Paper Bag	Purchase Paper Bags – 15 paper bags per week at 25 cents each.	\$195.00	None	None	\$195.00
Durable Reusable Bag	Purchase 16 durable reusable bags. Machine wash and dry bags on a monthly basis. (Assumes 2 year lifespan)	16 bags at \$6 each for two years or \$48 per year.	Full Bag Handling - \$52.00	12 hours at \$12 per hour or \$144 per year. Plus \$18 in higher utility bills per year.	\$262.00
Cheap Reusable Bag	Purchase 16 cheap reusable bags and hand wash them on a monthly basis. (Assumes 1 year lifespan.)	16 bags at \$2 each or \$32 per year.	Full Bag Handling - \$52.00	1.5 hours per month or 18 hours per year at \$12 per hour or \$216 per year	\$300.00

Repurposing used plastic bags was not considered in this comparison. In particular, used plastic bags have a multitude of reuses around the house. Without used plastic bags, other bags (such as small trash bags) will need to be purchased and used in their place.

Another factor not considered is the cost of aggravation and stress. In the middle of finding parking spaces, rushing to do errands, and possibly juggling a child or two, the shopper must ensure that they brought bags, consider how much shopping they may do, remember to bring enough bags when they leave the car, and pay the price of purchasing paper bags if they underestimate the volume of their purchases.

Also not considered is the ease and convenience at which people can stock and carry reusable bags. The reusable bag option is not considered possible for someone who regularly takes public transportation, walks, rides a bike, stops by a store while carpooling or riding with a friend, or has a schedule which is not completely predictable. Carrying around 5 to 10 reusable bags at all times just in case a person goes shopping is not considered practical unless they can be stored in a car.

In places where bag bans have been implemented, the most common scenario is that people go to the expense of buying and trying to use reusable bags, yet still end up purchasing paper bags at the store when they either forget their bags or do not have enough. The total cost is then a baseline of the reusable bag costs supplemented by purchased paper bags on occasion.

Conclusion

By far, the cheapest, most convenient and safest option is to have stores supply free sanitary plastic carryout bags to any customer who chooses to use them.

However, when a plastic carryout bag ban is implemented by the government, the cheapest, most convenient, and safest option is for each consumer to purchase a box of plastic carryout bags for each of their cars, keep them in the car, and take enough with them when they go shopping. Cost is about \$45.80 per year.

The next cheapest option is to purchase paper bags at the store which will cost \$78 per year at 10-cents a bag or \$195 per year at 25-cents per bag. The advantage of this option is that no pre-planning is required, although not all stores may offer paper bags.

If the consumer chooses to purchase and use reusable shopping bags, manage them, wash and sanitize them, it will cost the family between \$262 and \$300 per year. However, this option carries with it potential health risks associated with reusable bags.

Using reusable bags is the most costly, the most difficult, and the most unhealthy method to transport purchases home when living under a government mandated plastic bag ban. Ironically, this is the very method that bag ban proponents are trying to coerce people into using.

But no matter which solution you choose to carry your purchases home, it will cost you much more. And you will be yearning for those good old days when merchants offered a free bag for the privilege of shopping in their store.

¹ California's average labor rate is \$25.17 per hour. A rate of less than half the average labor rate (\$12) was used to calculate the value of a person's time associated with handling shopping bags. If the average labor rate was used, or it was factored higher for high income areas (such as where bag bans have so far been implemented), the annual cost of the reusable bag options would double or triple.