

# A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

Policy Report No. 340

by Pamela Villarreal and Baruch Feigenbaum

August 2012

*Grocers and other retailers nationwide pack consumers' purchases in plastic bags. However, a growing number of jurisdictions — including Los Angeles County, and cities such as Austin and Seattle — have banned the use of thin-film plastic bags. Other local governments, such as the Washington, D.C., city council, have implemented a per-bag tax.*

## Executive Summary

Grocers and other retailers nationwide pack consumers' purchases in plastic bags. However, a growing number of jurisdictions — including Los Angeles County, and cities such as Austin and Seattle — have banned the use of thin-film plastic bags. Other local governments, such as the Washington, D.C., city council, have implemented a per-bag tax.

In July 2011, the Los Angeles County bag ban took effect for large grocery and retail stores in some areas of the county. In January 2012, the ban took effect for smaller grocery and convenience stores. The ban did not apply to any stores in incorporated areas of Los Angeles County. The National Center for Policy Analysis conducted a survey of store managers in both areas, regarding the plastic bag ban. This study reports those results.

The purpose of the survey was to determine the effects of the ban on sales and employment at the stores affected by the ban. The study also sought to determine if consumers changed their shopping behavior by increasing purchases at stores that could still offer plastic bags. The survey found that following full implementation of the ban, sales increased at stores in incorporated cities compared with stores in unincorporated areas. Of these respondents to the survey affected by the ban:

- Over a one-year period (pre- and post-bag ban), 60 percent of stores in incorporated areas reported an increase in sales averaging 9 percent.
- Four-fifths of the stores in the unincorporated areas reported a decrease in sales averaging, -5.7 percent.

Examining the overall change in sales of all the stores that responded among the two groups (incorporated versus unincorporated):

- Incorporated stores experienced an increase in sales of 3.4 percent.
- However, unincorporated stores reported a decline in sales of -3.3 percent.

The ban negatively affected employment at stores inside the ban area. While every store inside the ban area was forced to terminate some of its staff, not a single store outside the ban area dismissed any staff. Stores inside



Dallas Headquarters:  
12770 Coit Road, Suite 800  
Dallas, TX 75251  
972.386.6272

[www.ncpa.org](http://www.ncpa.org)

Washington Office:  
601 Pennsylvania Avenue NW,  
Suite 900, South Building  
Washington, DC 20004  
202.220.3082

ISBN #1-56808-219-3  
[www.ncpa.org/pub/st340](http://www.ncpa.org/pub/st340)



## A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

the ban area reduced their employment by more than 10 percent. Stores outside the ban area increased their employment by 2.4 percent.

Many stores also began purchasing reusable bags. While 43 percent of stores in the ban area had not purchased reusable bags before, every store purchased these bags after the ban. And nearly half of these stores (48 percent), lost money on reusable bags. Of the stores that lost money, 38 percent expected the losses to stop after one month to three months, another 38 percent thought the losses would continue indefinitely. In order to stop losing money, 29 percent of stores ceased providing free reusable bags, and another 36 percent increased prices on these bags. Most stores also lost money on paper bags.

The study also examines the economic, environmental and health effects of bag bans and analyzes their potential costs and benefits. Plastic bags are better for the environment than reusable or paper bags. For an equivalent amount of groceries, production of paper bags requires three times as much total energy and recovers only 1 percent of that

energy through combustion. Paper bags also produce substantially more landfill waste. For an equivalent amount of groceries, single-use plastic bags produce 15.5 pounds of waste while paper bags produce nearly 75 pounds of waste.

Paper bags also produce more greenhouse gases. Plastic bags generate 68 percent fewer greenhouse gases than composted paper bags. Plastic bags consume 71 percent less energy during production than paper bags. Reusable bags may be the worst of all. Such bags need to be used 104 times to be less polluting than plastic bags. However, such bags are used only 52 times on average.

Policymakers' targeting of plastic bags is unfortunate. Banning or taxing such bags reduces economic activity and increases unemployment. However, plastic bags are less harmful to the environment than either paper or reusable bags. There are no economic or environmental reasons for banning or taxing plastic bags.

### About the Authors

**Pamela Villarreal** is a senior fellow with the National Center for Policy Analysis. Villarreal is an expert on retirement, Social Security, economic growth and tax issues and has authored studies and analyses on specific topics, including the danger of 401(k) borrowing, Social Security disability, the expiration of tax cuts and the future of Social Security and Medicare. Villarreal blogs about these topics and more at [www.retirementblog.ncpa.org](http://www.retirementblog.ncpa.org).

Villarreal has bachelor's and master's degrees in Applied Economics from the University of Texas at Dallas.

**Baruch Feigenbaum** is a policy analyst at Reason Foundation. Feigenbaum has a diverse background researching transportation issues including public-private partnerships, high-speed rail, highway funding, land use, government spending and ports.

Prior to joining Reason, Feigenbaum worked for U.S. Representative Lynn Westmoreland on transportation and environmental issues on Capitol Hill. He earned his master's degree in City and Regional Planning with concentrations in Transportation and the Environment from the Georgia Institute of Technology. Feigenbaum holds a bachelor's degree in Public Policy from Georgia State University.

## Introduction

Grocers and other retailers nationwide pack consumers' purchases in plastic bags. However, a growing number of jurisdictions — including Los Angeles County, and cities such as Austin and Seattle — have banned the use of thin-film plastic bags. Other local governments, such as the Washington, D.C., city council, have implemented a per-bag tax.

This study reports the results of a new survey conducted by the National Center for Policy Analysis regarding the plastic bag ban recently implemented in Los Angeles County. It also examines the economic, environmental and health effects of bag bans and analyzes their potential costs and benefits.<sup>1</sup>

Banning plastic bags causes significant economic harm. Proponents of plastic bag bans primarily argue that such bans reduce the amount of waste entering landfills, lessen litter problems, help protect the environment and reduce petroleum consumption. However, none of these claims is supported by facts. Banning plastic bags is harmful to local economies and is not environmentally justified.

## Economic Effects of the Los Angeles County Bag Ban

In 2011, the Los Angeles County Board of Supervisors passed an ordinance outlawing retailers' use of thin-film polyethylene bags to pack consumers' purchases. The bag ban was implemented in unincorporated areas (outside of city limits) of Los Angeles County in two stages. At first, the bag ban applied to large

stores — with gross annual sales of at least \$2 million or with 10,000 square feet of retail space — effective July 1, 2011. The second stage of the ban included stores with gross annual sales of less than \$2 million or less than 10,000 square feet of retail space and became effective January 1, 2012. These stores included small grocery stores, drug stores and convenience stores.

*“A growing number of jurisdictions have banned the use of thin-film plastic bags.”*

County leaders assumed that the ordinance would eliminate the use of plastic bags and leave consumers with two choices: 1) shoppers could bring a personal reusable bag or other container to carry their goods, or 2) consumers could pay for a paper bag, with the fee acting as a penalty or deterrent to this option. When the county conducted its Environmental Impact Report (EIR) in 2009 it stated:

Should the proposed ordinances be adopted, it is anticipated that there would be a transition period during which consumers would switch to reusable bags. The County anticipates that a measurable percentage of affected consumers would subsequently use reusable bags (this percentage includes consumers currently using reusable bags) once the proposed ordinances take effect. The County further anticipates that some of the remaining consumers, those who choose to forgo reusable bags, may substitute plastic carryout bags with paper carryout bags.<sup>2</sup>

These were the only two choices county leaders considered. They failed to consider a third option: that consumers would shop at stores unaffected by the ban — that is, stores in the incorporated areas of Los Angeles County. They did not consider the possibility that commerce would migrate, or be displaced, due to the law. In order to determine the effectiveness and consequences of the Los Angeles County plastic bag ban, the NCPA conducted a survey of 80 large stores (supermarkets and variety stores) affected by the ban beginning in July 2011. Additionally, each large store in unincorporated Los Angeles County was matched with one or two other stores within two miles and also in an incorporated area. The stores were matched in order to compare the effect of any displacement of commerce due to the ban.

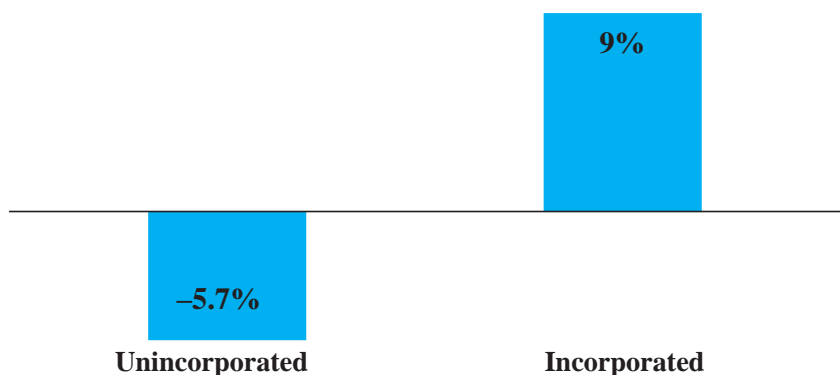
The NCPA also contacted another list of 700 smaller stores in unincorporated areas that were affected by the ban beginning January 1, 2012. Through letters, phone calls, emails and follow-up personal visits, NCPA staff sought responses to the survey from store managers. The response rate was 3 percent. [See Appendix I for the telephone script used.] [For a list of the questions asked, see Appendix II.]

**Impact on Sales.** Following the ban, sales increased at stores in incorporated cities compared with stores in unincorporated areas. Of the respondents to the survey:

- Over a one-year period (pre- and post-bag ban), 60 percent of stores in incorporated areas reported an increase in sales averaging 9 percent.
- Four-fifths of the stores in the

## A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

Figure I  
One-Year Average Change in Reported Sales



Source: Authors' calculations.

unincorporated areas reported a decrease in sales averaging, -5.7 percent.

Examining the overall change in sales of all the stores that responded among the two groups (incorporated versus unincorporated), Figure I shows:

- Incorporated stores experienced an increase in sales of 3.4 percent.
- However, unincorporated stores reported a decline in sales of -3.3 percent.

Though a variety of factors influence sales, the survey results are consistent with a shift in consumer purchases from stores in unincorporated areas affected by the ban to stores in incorporated areas that were not affected by the ban.

**Impact on Retail Employment.** The Los Angeles County bag ban is effective only outside of incorporated cities. However, 67 percent of the

land in Los Angeles County is in unincorporated areas, and 10 percent of the county's population (one million people) live in those areas.<sup>3</sup>

Compared to the four-to-five-month period before the ban took effect, none of the stores in incorporated areas of Los Angeles County reported employment losses following the ban. However, stores in the unincorporated areas reported job losses they attributed to displaced commerce: customers patronizing other stores that still offered plastic bags. In the initial period (July 2011 to January 2012) this included smaller stores in the unincorporated areas as well as comparable, competing supermarkets and drugstores in incorporated areas.

As shown in Figures II and III:

- Forty-three percent of the stores surveyed were in incorporated areas, and they reported employing more people in the

four to five months following the ban than before the ban.

- Overall employment increased 2.4 percent at stores in incorporated areas.
- However, stores in the unincorporated areas all reported that the number of individuals they employed dropped after the bag ban — by an average of 10.4 percent.<sup>4</sup>

Though some of these reported job losses could be the result of the economy, it is highly unlikely that employment would fall only among those stores in unincorporated areas. The unemployment rate in Los Angeles has been falling since July 2010, before the ban took effect. In July 2010, the unemployment rate in Los Angeles County was 13.4 percent; by May 2012, it had fallen to 11.1 percent.<sup>5</sup>

Retail jobs would not be the only employment affected if bag bans became widespread. Though outside the scope of this study, it is worth noting that most thin-film plastic bags are made in the United States, and the plastics manufacturing industry employs more than 30,000 people directly and many more indirectly.<sup>6</sup> By contrast, most reusable bags are imported. According to the U.S. International Trade Commission, approximately 573 million reusable bags were imported into the United States in 2011.<sup>7</sup> If plastic bag bans spread, more imported reusable bags will replace domestically-produced plastic bags. Thus, a ban has a negative impact on jobs.

**Impact on Bag Purchases.** As expected, in the months following implementation of the Los Angeles County ban, stores in unincorporated



areas reduced their plastic bag purchases. After the ban became effective:

- All of the stores in unincorporated areas responding to the survey reported reduced plastic bag purchases — declining by an average of 51 percent during the first month after the ban took place.
- Three-fourths of the large stores reported reducing plastic bag purchases, and purchases fell an average of 17.4 percent.
- Half of the small stores in unincorporated areas stopped purchasing plastic bags after the ban — an average decrease of approximately 86.5 percent.
- By the fourth month after the ban, all unincorporated stores reduced their plastic bag purchases 91 percent.

Over the same period, the stores in incorporated areas reported little to no change in plastic bag purchases.

**Reusable Bags.** In Los Angeles County, stores affected by the plastic bag ban had the option of giving away or selling reusable bags, in addition to offering paper bags for a 10-cent fee. The stores surveyed reported:

- Prior to the ban stores reported purchasing an average of 171 reusable bags per month.
- After the ban stores bought 2,275 bags per month, an increase of 1,232 percent.
- In total, 64 percent of stores increased their purchases, 29 percent decreased their purchases and 7 percent reported no change.
- While 43 percent of stores

**Figure II**  
**Employment Change: Stores in Incorporated Areas**



Source: Authors' calculations.

reported that they did not purchase reusable bags before the ban, every store purchased these bags after the ban.

Many of the stores reported losing money on reusable bags. One-third of stores gave the bags away and two-thirds sold reusable bags. Approximately 48 percent of stores reported losing money on reusable bags, while 52 percent did not lose money on such bags. The stores that lost money reported an average loss of more than \$600 per month. The stores were asked about their expectations for future losses:

- Nearly 38 percent of stores expected the losses to stop after one month to three months, 12.5 percent between four months to six months, and another 12.5 percent between six months and year.
- Another 38 percent expected the losses to last indefinitely (more than 1 year).

- In order to avoid losing money, almost 29 percent of stores said they would stop providing free reusable bags, and almost 36 percent said they would raise prices on these bags.

While stores lost money due to the plastic bag ban, customers lost both money and their freedom of choice (which reduces consumer welfare). Many customers prefer plastic bags to paper or reusable bags. As a result, it is likely that some consumers in unincorporated areas instead patronize stores in incorporated areas that offer plastic bags.

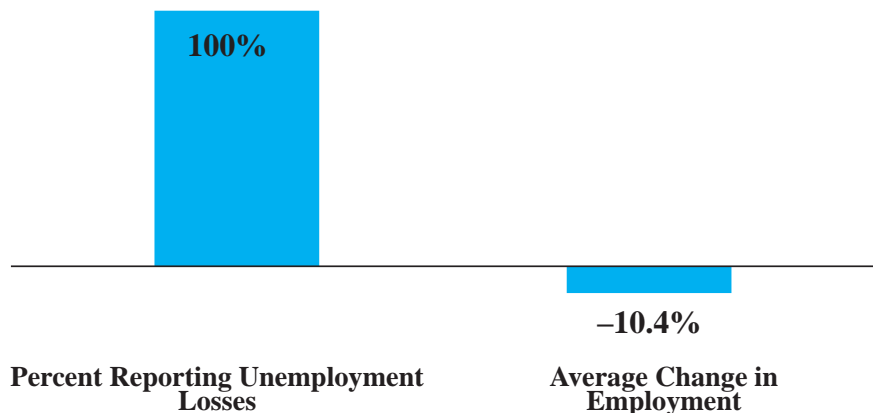
**Alternatives to Reusable Bags.** Without plastic bags, some customers decided to use alternative means to transport their groceries.

*Shopping Carts and Hand Baskets.* Almost 20 percent of stores noted increases in the loss of shopping carts or hard shopping baskets. These losses totaled \$500 to \$3,000

## A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

Figure III

### Employment Change: Stores in Unincorporated Areas



Source: Authors' calculations.

per month, with an average loss of \$1,500. In an industry that relies on profit margins of less than 2 percent, \$3,000 a month is a significant loss.

**Produce Bags.** Since customers could no longer use plastic bags to transport their groceries, some chose to put more of their grocery items in bags that were not banned — clear plastic produce bags. This explains why stores reported ordering nearly 31 percent more plastic produce bags after plastic grocery bags were banned.

**Paper Bags.** Though Los Angeles County banned plastic bags, it allowed the stores to offer consumers paper bags, but required them to charge customers 10 cents per bag. However, because stores could not predict with certainty how customers would react, they changed their purchasing strategies in different ways. But almost all experienced some kind of monetary loss:

- Some stores decreased purchases of paper bags by one-third while

others increased paper bag purchases by 1,625 percent.

- Though more than half (56 percent) of stores increased their paper bag purchases, those that purchased more bags purchased significantly more while those that purchased less purchased only a few less.

Paper bags are not functionally equivalent to plastic bags. Though a standard paper bag can hold a greater volume of products than a single plastic bag, they are less flexible, lack handles and do not have the same potential for reuse as plastic bags. Furthermore, given a choice, some consumers may prefer plastic bags over paper or the inconvenience and expense of carrying reusable bags.

### Environmental Effects of Plastic and Reusable Bags

The main reason policymakers give for banning thin-film plastic

bags is the impact of the bags on the environment. However, the environmental effects of plastic bags are negligible — and in a number of ways plastic bags are environmentally preferable to the alternatives.

#### Energy and Water Consumption.

Producing plastic, paper and other types of bags requires energy, but some of that energy can be recovered if bags are recycled through combustion.<sup>8,9</sup>

- Traditional plastic bags require only 182,361.4 kcal of energy to produce, but some 2,581.3 kcal of energy can be recovered through combustion.
- By contrast, compostable plastic bags made of starch and other materials<sup>10</sup> (an alternative to traditional plastic bags) require more than twice as much energy (494,741.9 kcal) to produce, but only 3,477.5 kcal can be recovered through combustion.
- Paper bags fare the worst, with more than three times as much energy consumption as plastic bags (626,672.9 kcal), whereas only 6,859.5 kcal can be recovered through combustion.

**Landfill Waste.** An Environmental Protection Agency (EPA) study compared the weight of material entering the municipal waste stream, net of the material consumed by the combustion process, per 1,000 paper bags, 1,500 plastic bags and 1,500 compostable bags (for equivalent carry capacity):<sup>11</sup>

- The production, use and disposal of plastic bags produces a net 15.51 pounds of municipal solid waste.

- Compostable plastic bags produce 42.32 pounds of municipal solid waste.
- Paper bags produced the most municipal waste, nearly 75 pounds.

Thus, traditional plastic bags recover the largest percentage of energy. They also leave behind the smallest amount of municipal solid waste.

*Water Use.* A study of Australian shopping bags found that of various alternatives — single-use plastic bags, compostable plastic bags, paper bags and reusable bags — paper bags had the worst energy and environmental impact with respect to global warming, land use, water use and solid waste.<sup>12</sup> The study measured environmental impacts for the equivalent number of different types of bags — based on a functional unit of 520 paper, single-use plastic or compostable plastic bags, or 4.1 cloth bags.<sup>13</sup> Production and use of plastic and compostable plastic bags consumed about 13.7 quarts of water (net), whereas cloth bags consumed about 52.8 quarts.<sup>14</sup> The study found that single-use bags contributed 5.95 pounds of solid waste, whereas compostable plastic bags contributed only 1.83 pounds of solid waste. But reusable cloth bags contributed the most solid waste: 7.24 pounds.

*Plastic Bags versus Paper Bags.* Plastic bags are significantly more environmentally friendly than paper bags. According to *Use Less Stuff*, an environmental advocacy group, plastic bags generate 39 percent less greenhouse gas emissions than uncomposted paper bags and 68 percent less greenhouse gas

emissions than composted paper bags.<sup>15</sup> Additionally, plastic bags consume less than 6 percent of the water needed to make paper bags. More than 16 plastic bags can be created for every one paper bag using the same amount of water. Plastic bags consume 71 percent less energy during production than paper bags. Using paper bags instead of plastic bags generates almost five times more solid waste.

*“Nationwide, plastic bags constitute no more than 1 to 2 percent of all litter, on average.”*

The United Kingdom’s Environmental Agency evaluated nine categories of environmental impacts of paper and plastic bags. Paper bags were more environmentally harmful than plastic bags in every category: global warming potential, abiotic depletion, acidification, eutrophication, human toxicity, fresh water aquatic ecotoxicity, marine aquatic ecotoxicity, terrestrial ecotoxicity and photochemical oxidation.<sup>16</sup>

*Plastic Bags versus Cloth Bags.* Plastic bags are also noticeably more environmentally friendly than reusable cloth bags.

While most plastic bags are manufactured domestically, most reusable bags are produced outside the United States in places like China. These bags are then transported via gas-guzzling cargo ships to customers

in the United States. Cargo ship transport is a significant generator of pollution. Additionally, as reusable bags are made from cotton and other sources that require substantial amounts of farmland to produce, the production of cloth bags leads to destruction of forests in cotton producing regions. These farms can also increase erosion and lead to pesticides in drinking water. Cloth bags are much more challenging to recycle since they contain a combination of materials including metal, cotton and other fabrics.<sup>17</sup>

The United Kingdom’s Environmental Agency determined that cotton bags have to be used 104 times before their environmental performance surpasses that of plastic bags.<sup>18</sup> However, the average cotton bag is only used 52 times, and some cloth bags are used much less. As a result, cloth bags have twice the negative environmental impact of plastic bags.

**Litter.** Studies show that plastic bags represent a tiny portion of litter and that banning them has not reduced the amount. Nationwide studies show that plastic bags constitute no more than 1 percent to 2 percent of all litter, on average.<sup>19</sup> According to the Keep America Beautiful campaign, plastic bags are not one of the top 10 sources of litter nationwide.<sup>20</sup> The results of litter studies in various localities are fairly consistent:

- In Austin, Texas, for example, an evaluation of representative litter found that plastics comprised 0.6 percent of the city’s total litter — but the figure was likely high due to the inclusion of other plastic waste, such as trash bags.<sup>21</sup>

## A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

- In California, a Statewide Waste Characterization Study found that plastic bags constitute only 0.3 percent of the waste stream in the state.<sup>22</sup>
- In San Francisco, surveyors found that plastic bags comprised 0.6 percent of the city's litter before a local ban was enacted, and a year after the ban, the portion of the city's litter attributable to plastic bags actually increased to 0.64 percent.

**Recycling.** A much larger percentage of plastic bags are recycled today than 10 years ago. According to a survey conducted by Moore Recycling Associates, the number of bags recovered increased 27 percent between 2009 and 2010.<sup>23</sup> These bags made up approximately 13 percent of the total film and bag material recovered in 2010. This amounted to approximately 127 million pounds of plastic bags recycled in 2010, compared with 100 million pounds in 2009. According to the EPA, almost 12 percent of plastic bags were recycled in 2010.<sup>24</sup> The number of bags recycled can substantially change the economic and environmental costs of the bags.

### Health Concerns Regarding Reusable Cloth Bags

There are also significant public health issues with reusable bags. Researchers from the University of Arizona and Loma Linda University have found that the reuse of grocery bags can lead to cross-contamination and a proliferation of disease-carrying bacteria.<sup>25</sup> To determine the safety

of reusable cloth bags, researchers collected reusable bags at random from customers who entered grocery stores in Arizona and California. In interviews, they found that reusable bags are rarely washed and often used for multiple purposes. Researchers discovered large numbers of bacteria in nearly all of the bags and coliform bacteria in approximately half of the bags. *E coli* bacteria were identified in 12 percent of the examined bags.

*“Banning plastic bags  
reduces employment.”*

This problem can be mitigated if reusable bags are washed regularly. Washing cloth bags can reduce bacteria by up to 99.9 percent. However, customers would have to wash the bags consistently; just one failed washing could lead to dangerous levels of bacteria. A total of 97 percent of all customers reported not cleaning their cloth bags on a regular basis.<sup>26</sup> However, regular washing increases the environmental impact of reusable bags through increased water and energy use. Single use plastic bags do not have these health issues.

### Conclusion

Policymakers hope that banning plastic bags will encourage customers to use cloth bags, but whether or not that occurs, the ban itself produces economic and environmental harm.

The economic costs are substantial. Banning plastic bags reduces employment; provides an unfair advantage to retailers in one geographic area over another; leads to the theft of store shopping carts and shopping baskets; results in customers using more plastic produce bags (thus undercutting the effect of the ban); increases prices for consumers; decreases profit for producers; and decreases economic activity in the area. An impartial cost-benefit analysis would be unlikely to justify banning plastic bags.

Importantly, there are also no environmental benefits to banning plastic bags — but there is potential harm. Compared to cloth bags, plastic bags require less energy to produce and less energy to recycle and produce less municipal waste. Plastic bags generate fewer greenhouse gas emissions and require less water to produce than paper bags. Cloth bags need to be used 104 times before there is any environmental advantage over plastic bags. But most cloth bags are used half that amount. Reusing cloth bags can also lead to cross-contamination and disease.

Plastic bags may be an easy target for politicians. However, they are better for the environment than either paper or cloth bags, and many consumers prefer them. Before banning any product policymakers need to conduct a detailed economic and environmental analysis. Unfortunately, in Los Angeles County and other jurisdictions that have imposed bans or punitive taxes on bags, such studies have not been done. Since banning plastic bags harms both the economy and the environment, the use of plastics bags should be permitted.



## Appendix I: Plastic Bag Script

The following script was used when NCPA staff contacted store managers.

“Hi, can I speak to the store manager please? Thank you.”

“Hi, I’m \_\_\_\_\_ calling from the National Center for Policy Analysis. We are studying the economic impact of the new plastic bag legislation, and specifically how it has impacted store sales and profits.”

“What I’ve been doing is speaking to different store managers in the Los Angeles area (like yourself) to try and get a feel for the way the plastic bag ban has affected their stores.”

“We would like to send you a pretty short, 21-question survey that you can complete whenever it’s convenient. (We can send it to you via email, fax, or regular mail.) And for the store managers that participate we’ve been sending out a 100-dollar check card once it’s completed because it really helps us out with our research. Additionally, once the report is completed, we will send out a copy of the study so you can see the effect the bag ban has had on *your* store. So, would you be willing to fill out a survey and help us with our research?”

If NO: Thank them and hang up.

If YES: Thank them, ask how they would like to receive the survey, get their information, thank them again, and hang up. Also, answer any questions they may have (within reason) about the survey.

## Appendix II: Plastic Bag Ban Survey

Introduction: This survey is an attempt to gauge the economic impact of the recent ban on thin-firm plastic grocery bags (“plastic bags”) on grocery and drug stores within two miles of the border between incorporated areas and unincorporated areas of Los Angeles County. Your answers will be confidential.

[Note: Questions marked with an asterisk (\*) had slightly different answer selections based on the time a store’s bag ban took place. For stores that were affected by the January 1, 2012, ban, the year to year sales and employment responses were measured from January, February, March and April 2011 to January, February, March and April 2012. Questions #12 and #13 were based on January, February and May 2012 results.]

1. How would you classify your store?

- ☐ \_\_\_\_ A large grocery/major chain grocer
- ☐ \_\_\_\_ A large retail store that sells groceries as well
- ☐ \_\_\_\_ An independent grocery store
- ☐ \_\_\_\_ A grocery store primarily catering to an ethnic population
- ☐ \_\_\_\_ A drug store

2. Is the store located in

- ☐ \_\_\_\_ An unincorporated area of Los Angeles County?
- ☐ \_\_\_\_ An incorporated area of Los Angeles County?
- ☐ \_\_\_\_ Another area of California?

## A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

---

3. \*What was the difference in your store's sales for these months comparing 2010 to 2011 in actual dollars?

- May 2010 to May 2011: \_\_\_\_\_
- June 2010 to June 2011: \_\_\_\_\_
- July 2010 to July 2011: \_\_\_\_\_
- August 2010 to August 2011: \_\_\_\_\_
- September 2010 to September 2011: \_\_\_\_\_

4. \*Was the store's actual change for the corresponding months in the previous question an increase or decrease from the previous year?

- May 2010 to May 2011: \_\_\_\_\_
- June 2010 to June 2011: \_\_\_\_\_
- July 2010 to July 2011: \_\_\_\_\_
- August 2010 to August 2011: \_\_\_\_\_
- September 2010 to September 2011: \_\_\_\_\_

5. \*This represents what percent change over the previous year?

- May 2010 to May 2011: \_\_\_\_\_
- June 2010 to June 2011: \_\_\_\_\_
- July 2010 to July 2011: \_\_\_\_\_
- August 2010 to August 2011: \_\_\_\_\_
- September 2010 to September 2011: \_\_\_\_\_

6. \*How many plastic bags did your store purchase?

- May 2010: \_\_\_\_\_
- June 2010: \_\_\_\_\_
- July 2010: \_\_\_\_\_
- August 2010: \_\_\_\_\_
- September 2010: \_\_\_\_\_

7. \*How many plastic bags did your store purchase?

- May 2011: \_\_\_\_\_
- June 2011: \_\_\_\_\_
- July 2011: \_\_\_\_\_
- August 2011: \_\_\_\_\_
- September 2011: \_\_\_\_\_

8. \*How many paper bags did your store purchase?

- May 2010: \_\_\_\_\_
- June 2010: \_\_\_\_\_
- July 2010: \_\_\_\_\_
- August 2010: \_\_\_\_\_
- September 2010: \_\_\_\_\_

9. \*How many paper bags did your store purchase?

- May 2011: \_\_\_\_\_
- June 2011: \_\_\_\_\_
- July 2011: \_\_\_\_\_
- August 2011: \_\_\_\_\_
- September 2011: \_\_\_\_\_

10. \*How many reusable bags did your store purchase?

- May 2010: \_\_\_\_\_
- June 2010: \_\_\_\_\_
- July 2010: \_\_\_\_\_
- August 2010: \_\_\_\_\_
- September 2010: \_\_\_\_\_

## A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

---

11. \*How many reusable bags did your store purchase?

- ☐ May 2011: \_\_\_\_\_
- ☐ June 2011: \_\_\_\_\_
- ☐ July 2011: \_\_\_\_\_
- ☐ August 2011: \_\_\_\_\_
- ☐ September 2011: \_\_\_\_\_

12. \*How many employees (full-time or full-time equivalents, including part-timers) did you have in

- ☐ May 2011: \_\_\_\_\_
- ☐ June 2011: \_\_\_\_\_

13. \*How many employees (full-time or full-time equivalents, including part-timers) do you have now

- ☐ December 2011: \_\_\_\_\_

14. Prior to the plastic grocery bag ban were you

- ☐ Selling reusable bags?                      Yes \_\_\_\_\_                      No \_\_\_\_\_
- ☐ Giving away reusable bags?                      Yes \_\_\_\_\_                      No \_\_\_\_\_

15. Are you losing money on reusable bags?                      Yes \_\_\_\_\_                      No \_\_\_\_\_

16. \*If you are losing money on reusable bags, how much did you lose in

- ☐ June \_\_\_\_\_
- ☐ July \_\_\_\_\_
- ☐ August \_\_\_\_\_
- ☐ September \_\_\_\_\_



17. If you are losing money on reusable bags, how many months will you continue to absorb the loss?

- ☐ 1-3 months: \_\_\_\_\_
- ☐ 4-6 months: \_\_\_\_\_
- ☐ 6-12 months: \_\_\_\_\_
- ☐ Longer than 12 months: \_\_\_\_\_

18. If and when you decide to cease absorbing your store's loss on reusable bags, what actions will you take?

- ☐ Stop giving bags away \_\_\_\_\_
- ☐ Raise prices on the reusable bags \_\_\_\_\_
- ☐ Other (please specify) \_\_\_\_\_

19. Have you noticed an increase in the loss of shopping carts and/or hard plastic shopping baskets since the bag ban was enacted?      Yes \_\_\_\_\_      No \_\_\_\_\_

20. If you have noticed a rise in shopping cart/plastic basket losses, approximately how much have your costs increased? \_\_\_\_\_

21. \*How many plastic produce bags did you order in each of the following months in 2012?

- ☐ May \_\_\_\_\_
- ☐ June \_\_\_\_\_
- ☐ July \_\_\_\_\_
- ☐ August \_\_\_\_\_
- ☐ September \_\_\_\_\_

# A Survey on the Economic Effects of Los Angeles County's Plastic Bag Ban

## Endnotes

- <sup>1</sup> The authors wish to acknowledge the following individuals for their contributions to this report: H. Sterling Burnett, Wesley Dwyer, David Taylor, Alex Emhke, Brian Bodine, Carolyn Needham and Alexis Hunter.
- <sup>2</sup> *Ordinances to Ban Plastic Carryout Bags in Los Angeles County*; Sapphos Environmental, Inc. Available at <http://dpw.lacounty.gov/epd/aboutthebag/pdf/FinalEIR.pdf>, pages 1-13.
- <sup>3</sup> Office of Unincorporated Area Service, L.A. County Chief Executive Office. Available online at <http://ceo.lacounty.gov/OUAS/>. Access verified July 17, 2012.
- <sup>4</sup> The drop in employment in stores affected by the Los Angeles County ban is consistent with a study that found an excise tax per plastic bag in Washington, D.C., reduced consumers' spendable income and caused job losses. See "The Impact of Bill 18-150 on the Economy of Washington, D.C.," Beacon Hill Institute, January 7, 2011. Available at <http://www.atr.org/files/files/DCBagTaxStudy.pdf>. Access verified July 2, 2012.
- <sup>5</sup> Bureau of Labor Statistics, "Local Area Unemployment Map: California." Available at <http://data.bls.gov/map/MapToolServlet>.
- <sup>6</sup> American Progressive Bag Alliance, "Save American Jobs — U.S. Map." Available at <http://www.plasticsindustry.org/APBA/Save/contentNR.cfm?ItemNumber=8844&navItemNumber=8763>.
- <sup>7</sup> U.S. International Trade Commission, "General First Unit of Quantity by HTS Number and by General First Unit of Quantity Annual" for Harmonized Tariff Schedule 4202923031.
- <sup>8</sup> Chet Chaffe and Bernard R. Yaros, "Life Cycle Assessment for Three Types of Grocery Bags — Recyclable Plastic; Compostable, Biodegradable Plastic; and Recycled, Recyclable Paper," Boustead Consulting and Associates Ltd., undated. Available at <http://static.reuseit.com/PDFs/Boustead%20Associates.pdf>.
- <sup>9</sup> Converted by the authors from joules, a measure of work or energy expended.
- <sup>10</sup> The compostable plastic bags are made of polylactide resin and a blend of Ecoflex.
- <sup>11</sup> "Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2005," U.S. Environmental Protection Agency. Available online at <http://www.epa.gov/osw/nonhaz/municipal/pubs/msw-2005.pdf>. Access verified July 12, 2012.
- <sup>12</sup> Karli Verghese et al., "Environmental impacts of shopping bags," Sustainable Packaging Alliance Limited, April 30, 2009. Available at <http://mams.rmit.edu.au/r97dgq3iero9.pdf>.
- <sup>13</sup> The functional unit is defined as the number of shopping bags needed to carry 70 grocery items home each week for 1 year. This is the equivalent of 520 bags for paper, single-use plastic, and compostable plastic. This is the equivalent of 4.1 cloth bags per year, based on 104 trips per 2 years.
- <sup>14</sup> Karli Verghese et al., "Environmental impacts of shopping bags."
- <sup>15</sup> Robert Lilienfeld, "Review of Life Cycle Data Relating to Disposable, Compostable, Biodegradable, and Reusable Grocery Bags," Use Less Stuff, March 28, 2008. Available at <http://use-less-stuff.com/Paper-and-Plastic-Grocery-Bag-LCA-Summary-3-28-08.pdf>. Access verified July 3, 2012.
- <sup>16</sup> James D. Agresti, "Bans on Plastic Bags Harm the Environment," Reason Foundation, June 15, 2012. Available at <http://reason.org/blog/show/bans-on-plastic-bags-harm-the-envir>. Access verified July 2, 2012.
- <sup>17</sup> Jay Beeber, "Plastic Bag Ban Will Put Los Angeles In Landfill," Reason Foundation, May 23, 2012. Available at <http://reason.com/archives/2012/05/23/plastic-bag-ban-will-put-los-angeles-in>. Access verified July 2, 2012.
- <sup>18</sup> Angela Logomasini, "Plastic Bag Bans Are Bad for the Environment," Competitive Enterprise Institute, November 8, 2011. Available at [http://cei.org/sites/default/files/Angela percent20Logomasini percent20- percent20Plastic percent20Bag percent20Bans percent20are percent20Bad percent20for percent20the percent20Environment percent20- percent20WebMemo.pdf](http://cei.org/sites/default/files/Angela%20Logomasini%20-%20Plastic%20Bag%20Bans%20are%20Bad%20for%20the%20Environment%20-%20WebMemo.pdf). Access verified July 2, 2012.
- <sup>19</sup> Ibid.
- <sup>20</sup> P. Wesley Schultz and Steven R. Stein, "Litter in America: National Findings and Recommendations," Keep American Beautiful, 2009. Available at [http://www.kab.org/site/DocServer/Executive\\_Summary\\_-\\_FINAL.pdf?docID=4601](http://www.kab.org/site/DocServer/Executive_Summary_-_FINAL.pdf?docID=4601). Access verified July 2, 2012.
- <sup>21</sup> Ibid.
- <sup>22</sup> Jay Beeber, "Plastic Bag Ban Will Put Los Angeles In Landfill."
- <sup>23</sup> "2010 National Postconsumer Plastic Bag & Film Recycling Report," Moore Recycling Associates, January 2012. Available at <http://www.plasticbagrecycling.org/08.0/2010FilmReport.pdf>. Access verified July 3, 2012.
- <sup>24</sup> "Wastes – Resource Conservation – Common Wastes & Materials," U.S. Environmental Protection Agency. Available at <http://www.epa.gov/osw/conserve/materials/plastics.htm#recycle>. Access verified July 12, 2012.
- <sup>25</sup> Charles P. Gerba, David Williams and Ryan G. Sinclair, "Assessment of the Potential for Cross Contamination of Food Products by Reusable Shopping Bags," University of Arizona and Loma Linda University, June 9, 2010. Available at [http://uanews.org/pdfs/GerbaWilliamsSinclair\\_BagContamination.pdf](http://uanews.org/pdfs/GerbaWilliamsSinclair_BagContamination.pdf). Access verified July 2, 2012.
- <sup>26</sup> Ibid.

*The NCPA is a nonprofit, nonpartisan organization established in 1983. Its aim is to examine public policies in areas that have a significant impact on the lives of all Americans — retirement, health care, education, taxes, the economy, the environment — and to propose innovative, market-driven solutions. The NCPA seeks to unleash the power of ideas for positive change by identifying, encouraging and aggressively marketing the best scholarly research.*

### Health Care Policy.

The NCPA is probably best known for developing the concept of Health Savings Accounts (HSAs), previously known as Medical Savings Accounts (MSAs). NCPA President John C. Goodman is widely acknowledged (*Wall Street Journal*, WebMD and the *National Journal*) as the “Father of HSAs.” NCPA research, public education and briefings for members of Congress and the White House staff helped lead Congress to approve a pilot MSA program for small businesses and the self-employed in 1996 and to vote in 1997 to allow Medicare beneficiaries to have MSAs. In 2003, as part of Medicare reform, Congress and the President made HSAs available to all nonseniors, potentially revolutionizing the entire health care industry. HSAs now are potentially available to 250 million nonelderly Americans.

The NCPA outlined the concept of using federal tax credits to encourage private health insurance and helped formulate bipartisan proposals in both the Senate and the House. The NCPA and BlueCross BlueShield of Texas developed a plan to use money that federal, state and local governments now spend on indigent health care to help the poor purchase health insurance. The SPN Medicaid Exchange, an initiative of the NCPA for the State Policy Network, is identifying and sharing the best ideas for health care reform with researchers and policymakers in every state.

**NCPA President  
John C. Goodman is called  
the “Father of HSAs” by  
*The Wall Street Journal*, WebMD  
and the *National Journal*.**

### Taxes & Economic Growth.

The NCPA helped shape the pro-growth approach to tax policy during the 1990s. A package of tax cuts designed by the NCPA and the U.S. Chamber of Commerce in 1991 became the core of the Contract with America in 1994. Three of the five proposals (capital gains tax cut, Roth IRA and eliminating the Social Security earnings penalty) became law. A fourth proposal — rolling back the tax on Social Security benefits — passed the House of Representatives in summer 2002. The NCPA’s proposal for an across-the-board tax cut became the centerpiece of President Bush’s tax cut proposals.

NCPA research demonstrates the benefits of shifting the tax burden on work and productive investment to consumption. An NCPA study by Boston University economist Laurence Kotlikoff analyzed three versions of a consumption tax: a flat tax, a value-added tax and a national sales tax. Based on this work, Dr. Goodman wrote a full-page editorial for *Forbes* (“A Kinder, Gentler Flat Tax”) advocating a version of the flat tax that is both progressive and fair.

A major NCPA study, “Wealth, Inheritance and the Estate Tax,” completely undermines the claim by proponents of the estate tax that it prevents the concentration of wealth in the hands of financial dynasties. Senate Majority Leader Bill Frist (R-TN) and Senator Jon Kyl (R-AZ) distributed a letter to their colleagues about the study. The NCPA recently won the Templeton Freedom Award for its study and report on Free Market Solutions. The report outlines an approach called Enterprise Programs that creates job opportunities for those who face the greatest challenges to employment.

### Retirement Reform.

With a grant from the NCPA, economists at Texas A&M University developed a model to evaluate the future of Social Security and Medicare, working under the direction of Thomas R. Saving, who for years was one of two private-sector trustees of Social Security and Medicare.

The NCPA study, “Ten Steps to Baby Boomer Retirement,” shows that as 77 million baby boomers begin to retire, the nation’s institutions are totally unprepared. Promises made under Social Security, Medicare and Medicaid are inadequately funded. State and local institutions are not doing better — millions of government workers are discovering that their pensions are under-funded and local governments are retrenching on post-retirement health care promises.

### Pension Reform.

Pension reforms signed into law include ideas to improve 401(k)s developed and proposed by the NCPA and the Brookings Institution. Among the NCPA/Brookings 401(k) reforms are automatic enrollment of employees into companies’ 401(k) plans, automatic contribution rate increases so that workers’ contributions grow with their wages, and better default investment options for workers who do not make an investment choice.

The NCPA's online Social Security calculator allows visitors to discover their expected taxes and benefits and how much they would have accumulated had their taxes been invested privately.

### Environment & Energy.

The NCPA's E-Team is one of the largest collections of energy and environmental policy experts and scientists who believe that sound science, economic prosperity and protecting the environment are compatible. The team seeks to correct misinformation and promote sensible solutions to energy and environment problems. A pathbreaking 2001 NCPA study showed that the costs of the Kyoto agreement to reduce carbon emissions in developed countries would far exceed any benefits.

### Educating the next generation.

The NCPA's Debate Central is the most comprehensive online site for free information for 400,000 U.S. high school debaters. In 2006, the site drew more than one million hits per month. Debate Central received the prestigious Templeton Freedom Prize for Student Outreach.

### Promoting Ideas.

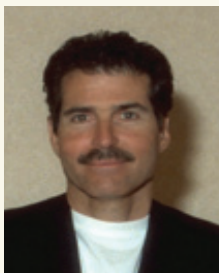
NCPA studies, ideas and experts are quoted frequently in news stories nationwide. Columns written by NCPA scholars appear regularly in national publications such as the *Wall Street Journal*, the *Washington Times*, *USA Today* and many other major-market daily newspapers, as well as on radio talk shows, on television public affairs programs, and in public policy newsletters. According to media figures from *BurrellesLuce*, more than 900,000 people daily read or hear about NCPA ideas and activities somewhere in the United States.

## What Others Say About the NCPA



*"The NCPA generates more analysis per dollar than any think tank in the country. It does an amazingly good job of going out and finding the right things and talking about them in intelligent ways."*

**Newt Gingrich**, former Speaker of the U.S. House of Representatives



*"We know what works. It's what the NCPA talks about: limited government, economic freedom; things like Health Savings Accounts. These things work, allowing people choices. We've seen how this created America."*

**John Stossel**,  
host of "Stossel," Fox Business Network



*"I don't know of any organization in America that produces better ideas with less money than the NCPA."*

**Phil Gramm**,  
former U.S. Senator



*"Thank you . . . for advocating such radical causes as balanced budgets, limited government and tax reform, and to be able to try and bring power back to the people."*

**Tommy Thompson**,  
former Secretary of Health and Human Services