Bag Bans - A Waste of Time and Money!

BANNING PLASTIC GROCERY BAGS HAS AN INCONSEQUENTIAL IMPACT ON LITTER!

PLASTIC BAG BANS NOT NEEDED! A WASTE OF TIME AND MONEY!

By Anthony van Leeuwen July 23, 2015

Executive Summary

Most plastic bag bans follow the simple formula of banning plastic grocery bags and placing a fee on paper bags in order to force shoppers to bring and use their own reusable bags. A bag ban is justified because littered plastic grocery bags are unsightly litter that can cause harm to wildlife through ingestion. However, absent from the discussion are three key issues: (1) the magnitude of plastic grocery bag litter; (2) the cost to consumers to comply with a bag ban; and (3) the impact on reducing litter, particularly plastic debris, that finds its way to the ocean and potentially causes harm to wildlife through ingestion. When these issues are honestly looked at we discover that plastic bag litter is negligible and the cost to consumers is disproportionate to the results achieved. For example, plastic bag litter comprises only 0.6% of roadside litter of which about only half (about 0.3%) is plastic grocery bags. Hence, a plastic bag ban will still leave 99.7% of litter that must be cleaned up through traditional litter abatement methods. The effort to clean up the remaining 99.7% of litter could easily include the other 0.3% (e.g. plastic grocery bags and retail carryout bags) as part of the total effort. In other words, a plastic bag ban is not needed and certainly NOT JUSTIFIED for the small amount of plastic grocery bags littered in the community. Furthermore, the cost to consumers to eliminate plastic grocery bags from roadside litter averages about 12-cents for each 2-cent plastic bag eliminated by a bag ban. Add to that the cost of plastic bag bans by local and state governments and costs incurred by retailers increasing the total cost far more than the 12-cents cost per plastic bag incurred by consumers! If you compute the annual cost per littered bag, it will be on the order of \$250.00 per littered plastic bag per year. Obviously, this is NOT a good deal for consumers! So not only is a plastic bag ban a waste of time and money for the public; it is also a waste of time and money on the part of the environmentalist who promotes bag bans for such a miniscule reduction in litter, when traditional comprehensive litter abatement methods exist that will not only eliminate all plastic bags but also other plastic debris that makes its way to the ocean potentially harming wildlife.

Introduction

According to proponents of plastic grocery bag bans, about one-third of Californians live in communities where progressive public officials, have already banned plastic grocery bags from distribution at the point of sale. These citizens are forced to bring their own reusable bags, or pay a fee of 10-cents for each store provided paper bag.

The remaining two thirds of Californians live in communities where shoppers still have the freedom to make their own choice as to what kind of shopping bag they will use to bring groceries home. A few (about 10%) have voluntarily chosen to use reusable shopping bags while most still use plastic bags (about 70%) or paper bags (about 5%) provided by the retailer at no charge. These citizens have chosen the kind of shopping bags that make the most sense to them and to their lifestyle. Most shoppers have rejected using reusable bags and prefer to use store provided paper or plastic bags because that is the most economical, efficient, and cost effective manner to carry groceries home. However, the statewide plastic bag ban, signed by Governor Brown is on hold pending a public vote in the 2016 statewide election that may put that freedom of choice in jeopardy.

Bag Ban Proponents (i.e. Bag Banners) justify banning plastic grocery bags because they end up as unsightly litter and find their way to the ocean via storm drains and creeks, and potentially harms wildlife through ingestion. However, harm to wildlife is not limited to plastic bag litter, but also extends to plastic debris of all types that make its way into waterways and the ocean.

The purpose of this article is to look at plastic bag bans from the perspective of effectiveness and cost. Effectiveness can be looked at in two ways. First, how effective a bag ban is in eliminating plastic grocery bags from the environment; and second, how effective is a bag ban is in eliminating litter including other plastic debris that potentially harms wildlife. Bag banners frequently make two key points: (1) the problem of plastic bag litter on city streets and the need to reduce unsightly litter, and (2) the problem of littered plastic bags harming wildlife through ingestion, particularly when conveyed to the ocean via storm drains and rivers. Therefore, the effectiveness of a bag ban will be analyzed from the perspective of how well litter is removed from the environment including plastic bags and plastic debris harmful to wildlife. Similarly, the cost of bag bans is looked at from the perspective of a cost/benefit analysis that looks at effectiveness compared to cost and whether the cost and benefit are reasonable.

In this article, we intend to show that bag bans are short on results and large on costs. In other words, the overall costs of bag bans compared to results are disproportionate and unreasonable. Hence, <u>bag bans are a waste of time and money because more effective solutions to solve litter problems are</u> readily available.

Bag Bans - Short on Results

In theory, a plastic bag ban will reduce or eliminate littered plastic grocery bags. Some cities that have implemented bag bans have noted the absence of plastic grocery bags in the environment; but those cities did not solve the overall litter problem (i.e. the 99.7% of litter not removed by a bag ban) nor did they prevent other plastic debris from flowing to the ocean via Stormwater runoff potentially harming wildlife. In the following critical analysis, the focus will be on the limitations of bag bans and their impact on total litter and harm to wildlife. This critical analysis will show that the bag bans are short on results and large on feel-good sentiment. For example:

- 1. A bag ban will only <u>reduce</u> the number of thin-film plastic carryout bags distributed. Bag Bans, with a few exceptions, apply only to grocery and convenience stores. Other retail stores will still be allowed to continue distribution of thin-film plastic carryout bags at the point of sale and a fraction of these bags will enter the litter stream.
- 2. A bag ban will only affect one (1) out of every two (2) littered plastic bags. Litter surveys conducted by the city of San Jose, California reveal a surprising fact, that for every littered plastic grocery bag, there is another littered plastic bag (zip-lock bag, plastic garbage bag, product bags, etc.). Hence, at the very best, a plastic bag ban will eliminate less than 50% of littered plastic bags. The littered plastic bags that remain in the environment will still harm wildlife! In other words, a bag ban has a very limited effect on plastic bag litter! (van Leeuwen, San Jose Litter Surveys Examined Plastic Bag Ban Completely Unjustified, 2015)
- 3. A bag ban will replace the thin-film plastic bags with paper or thick plastic "reusable" bags. The bag fee at 10-cents each means fewer shoppers will elect to use these bags (with the exception of shoppers who are on public assistance (e.g. food stamps) and receive these bags at no charge). However the annual cost of paying 10-cents each for paper or thick plastic reusable bag is less than the cost of using reusable bags. (van Leeuwen & Williams, Plastic Bag Alternatives Much More Costly to Consumers, 2013) As time goes on, shoppers will figure this out, get used to bag fee and purchase the paper or thick plastic bags, if for no other reason than convenience. It should be noted, that neither the paper nor the thick plastic "reusable" bags are reused by shoppers for shopping. These bags are used by consumers as single-use "disposable" carryout bags! While the thicker plastic reusable are recyclable, people like them better than the thin plastic bags and will reuse them for other uses and of course, we have to assume some will be littered.
- 4. A bag ban will have a <u>negligible</u> effect on litter. While plastic bag litter is more visible than other types of litter, it comprises less than 0.6% of roadside litter. Since the San Jose litter surveys show that one (1) out of every two (2) littered plastic bags is a plastic grocery bag it follows that plastic grocery bags make up only about 0.3% of roadside litter. In comparison, fast food waste makes up more than 29% of roadside litter. A plastic bag ban will not reduce roadside litter in any significant amount but will still leave more than 99.7% of litter in the environment including plastic debris that potentially could harm wildlife. Remaining litter is will still be waiting to be picked up by traditional litter abatement methods, <u>methods that could also pick up the other 0.3% of plastic bags as part of the total effort!</u> (van Leeuwen, Bag Bans: Wrong Way To Control Litter, 2013)
- 5. A bag ban is not justified for the few plastic bags that end up as litter. One city in California, San Jose, did conduct litter surveys over a period of three years. They collected a total of 2,913 plastic grocery bags or about 1,000 per year. Two-thirds of these plastic bags came from litter hot spots in local creeks. According to San Jose's Environmental Impact Report (EIR), every man, woman and child uses an estimated 520 plastic bags per year. Hence, the average of 1,000 littered plastic bags collected per year represents slightly less than the annual consumption of plastic bags by just two people out of a population of more than one million! The EIR also states that the City of San Jose consumes about 500 million plastic grocery bags per year; hence, the average of 1,000 plastic bags collected annually, represents just 0.0005% of the total number of

- plastic grocery bags used per year. Even if the actual litter rate, citywide, is 100 times greater than what the survey indicated, the number of littered plastic grocery bags is still very small (i.e. 0.05%). (van Leeuwen, San Jose Litter Surveys Examined Plastic Bag Ban Completely Unjustified, 2015)
- 6. A bag ban will have a negative impact on landfills. Plastic Grocery and Other Merchandise Bags make up only 0.3% of the total waste stream headed to the landfill, of which only 0.13% is plastic grocery store bags. (Integrated Waste Management Board, 2009) After a plastic bag ban is implemented, the remaining plastic bags, paper bags and reusable bags that are not recycled and are disposed of in the landfill is more than four times as much by weight than the plastic grocery bags put in the landfill prior to the ban. (van Leeuwen, Fact Sheet Landfill Impacts LASBVTA, 2013) You haven't heard Bag Banners admitting this, have you?
- 7. A bag ban will not prevent harm to marine wildlife. While plastic carryout bags that make their way to the ocean can become problematic for wildlife if ingested; other plastic objects (e.g. bottle caps, cigarette lighters, ballpoint pens, golf tees, balloons, etc.) and other plastic bags are also harmful to wildlife. Environmental organizations report that 80% of plastic debris in the oceans comes from land based sources via the storm drains that empty into rivers and into the ocean; the other 20% comes from sea based sources. (Algalita Marine Research Foundation, 2013) Eliminating one item out of the litter stream may appear to be the right solution, but is actually the wrong solution, because it prevents us from dealing with a comprehensive solution that addresses all litter including all kinds of plastic debris that is harmful to wildlife. There is no use in fooling ourselves that a bag ban will solve the problem, when it does not.
- 8. The installation of trash capture devices in storm drain inlets, catch basins, and outfalls will prevent litter, plastic debris including plastic grocery bags. The installation of trash capture devices in storm drain systems is required under the federal Clean Water Act also known as the Total Maximum Daily Loads (TMDL) program. In other words, the TMDL program alone will largely solve the problem with plastic bags and other plastic debris from being discharged into rivers and the ocean from storm drain outfalls, and brings into question the real need for a plastic bag ban and the need to shift towards using reusable bags.
- 9. Trash and plastic debris including plastic bags in creeks and rivers will not be eliminated as long as homeless encampments remain in or adjacent to riverbeds. Homeless encampments are a major source of litter in creeks and riverbeds and generate hundreds of tons of litter and trash. Let's face it; there is no trash pickup or sanitation services in homeless encampments and trash generated by campers is just tossed and conveyed to the ocean. Homeless encampments represent a major problem for local jurisdictions to deal with. A bag ban will not solve this litter problem. Removing homeless encampments from the river bottom and resettling these people into some kind of housing is the only way to prevent this litter and meet the requirements of the federal Clean Water Act. In other words, a bag ban without removing homeless encampments from the river bottom will have a limited effect on litter. (van Leeuwen, San Jose's Bag Ban Useless in Solving Litter Problems Should be Rescinded, 2015)

In view of the 9 points listed above, it should be noted that a <u>bag ban will not solve litter problems or prevent harm to marine or terrestrial wildlife</u>. A bag ban is more about "feeling good", about showing

that you care, and that you are doing something to benefit the environment; but is <u>short on tangible</u> results.

Bag Bans - Large on Cost

Bag Bans, besides being a nuisance to most shoppers, cost lots of money, not only on initial implementation costs but also on annual recurring costs. These costs are incurred by government jurisdictions, retailers, and consumers. Costs incurred by government jurisdictions are not as easy to determine without a public records request and costs incurred by retailers are normally confidential. Likewise, cost data incurred by consumers complying with the bag ban is very scarce. In fact, only two citizens groups' Fight the Plastic Bag Ban and Stop the Bag Ban developed a cost models based on available information that has been successfully used to provide a reasonable cost estimate and cost comparison. One of the difficulties in comparing the different bag options available to shoppers was how to account for the personal time involved in handling and washing reusable bags, a cost not normally incurred in using disposable paper and plastic bags. We will use these cost models to show that bag bans are costly. The consumer cost per plastic bag eliminated and also the consumer cost per littered plastic bag are also shown.

Consumer Cost Impact

In an article titled "Plastic Bag Alternatives Much More Costly to Consumers" the authors describe the various shopping bag alternatives available to shoppers and include an analysis of the costs associated with each alternative. Indirect and direct (Out-of-pocket) costs include the cost of purchasing bags, utility costs including water and energy, and the value of personal time to manage shopper supplied and reusable bags. Unique to our cost analysis, is consideration of the value of your personal time to manage reusable bags including inspecting, folding, putting them in the car, bringing them into the store, and washing them on a regular basis. (van Leeuwen & Williams, Plastic Bag Alternatives Much More Costly to Consumers, 2013)

Table 1 below, shows the annual cost of various shopping bag alternatives. The table shows the bag type, store or shopper supplied bags, total annual cost, and the cost factor. The cost factor is the cost of using each of the different bag types compared to using store supplied plastic grocery bags. Pre-Ban, a typical family of four will pay \$20.80 or about \$21 indirectly (included in retail prices) for plastic grocery bags on an annual basis. If that family decides to purchase their own supply of plastic grocery bags and bring them to the store, the cost is \$45.80 annually and the cost factor is slightly more than twice what store supplied plastic bags had cost. If that same family were to purchase the store supplied paper bags at 10-cents each the annual cost would be \$78 per year and the cost factor is almost 4 times as much. If the jurisdiction increases the bag fee to 25-cents per paper bag, the annual cost would be about \$195 and a cost factor of about 9.5 times as much. If that family chooses to use reusable bags the costs range between \$262 and \$300 per year, depending on the durability of the bags purchased, the cost factor increases to more than 12 times as much as plastic bags had cost pre-ban. It should be noted that the increase in annual costs continue indefinitely for the lifetime of the ban. (van Leeuwen & Williams, Plastic Bag Alternatives Much More Costly to Consumers, 2013)

Table 1: Annual Cost of Shopping Bag Alternatives

Bag Type	Supplied By	Total Annual Cost	Cost Factor	
Pre-Ban: Disposable Plastic Bags	Store	\$20.80	1.0	
Disposable Plastic Bags	Shopper	\$45.80	2.2	
Purchased Paper Bags (10-cents each)	Store	\$78.00	3.8	
Purchased Paper Bags (25-cents each)	Store	\$195.00	9.4	
Durable Reusable Bags	Shopper	\$262.00	12.6	
Cheap Reusable Bags	Shopper	\$300.00	14.4	
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NOTE: Store supplied bags are issued by the store at the point of sale. Shopper supplied bags are initially purchased by the shopper and then brought to the store by the shopper.

In an article titled "Statewide Bag Ban Would Cost Residents More Than \$1 Billion!" the author discusses and shows how a statewide plastic bag ban will cost Californians an additional \$1.089 Billion just to bring groceries home. (van Leeuwen, Statewide Bag Ban Would Cost Residents More Than \$1 Billion!, 2013) This is not a worst case analysis but an analysis based upon actual carryout bag usage observations of shoppers before and after a bag ban in the City of Santa Monica. The study was conducted by Team Marine, an environmental student group at Santa Monica High School. These high school students conducted observations of 50,400 grocery store patrons over a period of 19 months spanning from ten months prior to the Santa Monica Bag Ban to twelve months after. Team Marine subsequently published their report in March 2013 which included observations from before the ban, immediately after the ban and up to 1 year after the ban. (Team Marine, 2013) Results of the study are summarized in Table 2 below.

Table 2: Pre Ban and Post Ban Carryout Bag Usage

Team Marine Study (Santa Monica)	Plastic Bags	Paper Bags	Reusable Bags	No Bags or Other
Pre Ban	69%	5%	10%	15%
Post Ban	0%	23%	41%	36%
Post Ban + 1 Year	0%	29%	35%	36%

Table 2 shows the Pre-Ban and Post Ban percentage of shoppers who use plastic, paper, reusable, and no bags. What is interesting to note, is that before a bag ban is implemented only **10%** of shoppers choose to use reusable bags. Post Ban the percentage of shoppers using Reusable bags jumps up to **41%** and then after one year drops to **35%** while at the same time paper bags go from **23%** to **29%**. This is more likely because the cost of using and paying for paper bags is very competitive with the hassle of using reusable bags, and as shoppers get accustomed to paying a fee, they will. More importantly, the increase from **10%** to **35%** for reusable bag usage is a net increase of only **25%**. In other words, the bag ban fails to move a majority of shoppers into using reusable bags. Of course shoppers are not stupid, they act in their own self-interest and they refuse to put up with the hassle of using reusable bags and

instead, chose to use No bags or purchase paper bags by a factor of 2 to 1! (van Leeuwen, Shoppers Reject Using Reusable Bags, 2014)

Bag Ban Statewide Cost Increase

The usage statistics in Table 2 were used with California's population and average household size to determine the number of households using each type of bag or no bag before and after a bag ban. Then the costs from Table 1 are applied to the number of households using each method to carry groceries home. The Pre Ban estimated cost to state residents is \$581 million and the Post Ban estimated cost to state residents is \$1,468 million. (van Leeuwen, Statewide Bag Ban Would Cost Residents More Than \$1 Billion!, 2013)

It would be tempting to subtract the **Total Pre Ban Cost** from the **Total Post Ban Cost** to determine how much more the state's residents will have to pay. However, it is highly doubtful that residents will see retail prices reduced (i.e. by eliminating the indirect cost of plastic and paper bags built into retail prices); therefore, to compute the cost increase the **Pre Ban Total Reusable Bag** cost of \$379.7 million is subtracted from the **Post Ban Total Cost** of \$1,468 billion for a **net estimated increase of \$1.089 Billion**. (van Leeuwen, Statewide Bag Ban Would Cost Residents More Than \$1 Billion!, 2013)

The cost increase to California residents from a statewide bag ban averages 12-cents¹ for each plastic bag eliminated by the bag ban costing less than 2-cents each in bulk. This means that a plastic bag ban costs a community at the very minimum 6 times more on average than using plastic bags! (And that is with 36% of shoppers choosing to use no bags at all!)

Cost To Eliminate Littered Plastic Bags

No one knows exactly how many plastic grocery bags are littered during any one year. The best data we have available is the Litter Surveys conducted over a three year period where 2,913 plastic bags were recovered from surveys conducted on city streets, creeks, and storm drains. That is an average of about 1,000 per year (971 to be exact). Two-thirds of these bags originated from litter hot spots in city creeks. What is not known is if those bags came from homeless encampments in the riverbed, from the city's storm drain outfalls, or from recreational use of local creeks. We suspect that most of this litter came from the homeless encampment since California has been in a drought for more than four years, although we have no evidence that confirms this suspicion.

From a document titled Statewide by City Plastic Bag Ban Cost Increase Estimate the cost increase to San Jose residents directly attributable to the bag ban is \$24,416,982.06. By dividing this amount by the number of plastic bags littered will determine the cost to residents per littered plastic bag.

Because the San Jose litter surveys recovered on average 971 plastic grocery bags per year (about 0.0005% of the 500 million used per year), and because two-thirds came from litter hot spots in local creeks (more than likely originating from homeless encampments vice storm drain outfalls) we conservatively estimate that the city wide litter rate is about 100 times that or 0.05% of the total used

¹ Per bag cost based upon 8,752,288 California households at 1040 plastic bags per year or 9,081,579,520 plastic bags per year and an annual cost of \$1.089 billion.

per year. Table 3, shows consumer cost per littered bag versus the assumptions regarding the city wide litter rate. The litter factor is a multiplier applied to the number plastic grocery bags collected on average per year over the three year survey period. Assuming that the city wide litter rate is 100 times what was discovered during the survey, which would mean 97,110 plastic grocery bags per year are littered at a consumer cost of \$251.44 per littered plastic bag.

Table 3. Cost To Consumers per Littered Bag

Assumptions		Cost Per Littered	
Litter	# of Bags	Plastic Bag	
Factor			
1	971	\$ 25,143.63	
2	1,942	\$ 12,571.82	
5	4,856	\$ 5,028.73	
10	9,711	\$ 2,514.36	
20	19,422	\$ 1,257.18	
50	48,555	\$ 502.87	
100	97,110	\$ 251.44	
200	194,220	\$ 125.72	
500	485,550	\$ 50.29	

For a sanity check on the above number, we note that the City of San Jose, surrounding hillsides, and local creeks and waterways comprise an area of approximately 180 square miles. (City of San Jose, 2010) Therefore, 97,110 littered plastic bags would equate to 266 plastic bags littered per day or about 1.5 plastic bags per day per square mile. In one week, about 10.4 plastic bags would be littered per square mile. We believe this number is very close to the actual rate, primarily because we suspect that most of those plastic bags found in creeks originated with San Jose's homeless encampments in creek beds. We do provide some additional figures in table 3, in case the reader believes that number to be much higher.

Cost to Local Jurisdictions and Retailers

Local ordinances that implement plastic carryout bag bans are very similar from one community to the next. They ban the distribution of plastic carryout bags and impose a fee of 10 or 25-cents on paper bags or thick plastic reusable bags in order to force shoppers to bring and use their own reusable bags. In addition, most bag bans make these bags available to shoppers on public assistance, at no charge. In addition to regulating bag use, the ordinances have annual or quarterly reporting provisions that require stores in the jurisdiction to report the number of paper carryout bags issued and the amount of money collected for providing paper or thick-plastic carryout bags. In addition the store must summarize the efforts undertaken to promote the use of reusable bags in the previous quarter. (van Leeuwen, Plastic Bag Ban Creates New Administrative Regulatory Burdens, 2013)

The bag ban creates a new regulatory burden for the retailer that adds to the cost of doing business. All or some of that cost may be paid for by profit from the 10-cent bag fee; if not, costs will have to be recovered from customers through higher food and merchandise prices. The regulatory burden

continues indefinitely or until the ordinance is no longer in effect or until the city directs that quarterly reporting cease. (van Leeuwen, Plastic Bag Ban Creates New Administrative Regulatory Burdens, 2013)

On the city's side, the quarterly or annual reports must be processed and evaluated and statistics developed to determine if the goals of the ordinance are being met. Of course, annual reports to the city manager and the city council will also have to be made. In addition, there are costs associated with inspections of stores to determine that they are indeed complying with the ordinance.

Meanwhile, communities spend hundreds of thousands of dollars on administrative costs to pass and implement a ban, educate businesses and the public about the ban, sponsor free bag giveaways, and then ongoing thousands in time and money to manage and investigate complaints and reported bag ban violations.

What government officials never consider is the millions of dollars that their citizens must spend in time and money to purchase, maintain, and use paper and reusable bags. Thus, literally millions of dollars are spent just so that a small number of city workers can clean up a few less plastic bags that were littered by a small minority of the people.

In addition, the jurisdiction that implemented the Plastic Bag Ban will also incur thousands of dollars of costs annually in order to administer the ordinance. To spend thousands of taxpayer dollars to administer an ordinance that controls the type of bags residents use to carry groceries home from the supermarket is waste of taxpayer dollars and just plain stupid! Those tax dollars could be better spent fixing pot holes on city streets.

Costs to the State of California

In the event that voters in the 2016 election end up approving the plastic bag ban passed by the legislature and signed by the governor, then the State of California will also incur additional costs due to certifications of reusable bag manufacturers, certification that reusable bags meet size and durability requirements of SB 270, and that paper bags and plastic reusable bags contain the required post-consumer recycled material content required by SB 270. While some of these costs will be offset by fees paid by manufacturers, manufacturers will pass those costs to retailers and retailers to the consumer.

Cost to Bag Ban Proponents and Environmental Organizations

Bag Banners and Environmental organizations have spent countless hours promoting bag bans, both paid staff and volunteers, incurred thousands in travel costs to attend meetings, and incurred costs on reusable bag giveaways and promotions. The cost of labor, material, and travel expenses are probably in the millions of dollars and all for a miniscule reduction in litter. In their zeal to solve a problem through a bag ban, they were unable to see the forest from the trees, they ignored common sense, failed to ask questions and ignored and explained away objections, and in so doing pursued a goal that feels good but accomplishes very little. In fact, by choosing this strategy rather than pursuing a comprehensive solution to prevent all litter including a wide variety of plastic debris from entering waterways and the ocean, countless wildlife perished needlessly by ingesting plastic objects that were conveyed to the ocean. In the end achieving the exact opposite of what they may have intended.

Pursuing Comprehensive Solutions

So what are these comprehensive solutions to eliminate plastic debris and litter from waterways and the ocean? Here are just a few suggestions in order of priority:

- a. Monitor progress and put pressure on cities to install trash traps in storm drain inlets, catch basins, and outfalls and that these are properly and regularly maintained.
- b. Put pressure on cities and counties to permanently eliminate homeless encampments in or adjacent to the river bottom since trash discarded by campers is conveyed to the ocean during seasonal storms.
- c. Ensure that trash receptacles in public areas have self-closing lids and are emptied on a regular basis including on weekends during public events to prevent litter overflow.
- d. Ensure that organizations that hold public events are responsible for trash generated during the event and are responsible for cleaning up the area adjacent to event site.

Conclusion

This article clearly demonstrates that banning plastic bags does very little to eliminate plastic bag litter and clearly will not eliminate plastic debris that is so harmful to wildlife. While costs to the state and local jurisdiction for implementing bag bans including recurring costs are hard to document, the cost impact to consumers in order to comply with the bag ban can be modeled and reasonable cost figures obtained. Statewide we see that consumers will pay at least 12 cents for every plastic bag eliminated. If you look at cost in terms of *cost per littered bag*, you are looking at a cost of anywhere from \$125 to \$500 per littered bag, based upon the best information available.

The statewide plastic bag ban would cost consumers an additional \$1 Billion dollars annually. In addition, all government costs are also paid by the public through higher taxes. It should be obvious that the cost/benefit ratio for a miniscule improvement in litter is excessive. In other words, a bag ban is **A WASTE OF TIME AND MONEY**. The miniscule improvement in plastic bag litter could be more economically handled by traditional litter abatement methods with a much smaller overall cost.

About The Author

Anthony van Leeuwen is the founder of the <u>Fight the Plastic Bag Ban</u> website and writes extensively on the subject. He holds a bachelors and master's degree in Electronics Engineering and has over 40 years of experience working for the federal government.

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