



# Plastic Perception: An Analysis on Single-Use Consumerism

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## Abstract

Plastic has become essential to everyday use as the material is very cost-effective and therefore used to create various single-use products. According to the Ocean Conservancy, the amount of ocean plastic in weight will outweigh fish by 2050. Concerns about plastic pollution have provided an incentive for people to buy reusable products, which has been encouraged by legislation banning certain single-use products from being freely distributed. Data indicates that massive quantities of single-use plastic are simultaneously being produced and thrown away daily; however, there is little data that indicates whether reusable efforts have made a difference in slowing this process. Thus, the purpose of this study is to better understand: 1) whether people have measurably made a switch from using single-use items to reusable items; 2) whether levels of plastic pollution have changed following the implementation of plastic bans; and 3) whether knowledge about single-use products varies by a person's geographic location, income, education, or other demographic factors. Methods will include conducting surveys with individuals in both inland and coastal communities in Los Angeles, California, as well as analyzing data from beach cleanups from local organizations. We anticipate the findings will help show whether these reusable measures are effective, and if so, whether that is consistent across locations and populations. This can provide useful information to municipalities and other local organizations working to reduce plastic pollution

## Introduction

**Background:** This information will provide evidence of whether or not the environment is noticeably benefitting from the ban on plastic bags and the use of reusable items. Additionally, when learning whether inland or coastal communities are taking better part in using reusable items, we can learn why, and hopefully ultimately discover ways to encourage reusable items to people living in different settings/environments. The motivation behind this is to discover how effective California has been in its efforts of improving the environment, and to learn what simple efforts can still be done to promote environmentally friendly choices.

**Hypothesis:** We predict there will be an increase in the use of reusable products after the plastic bag ban, resulting in fewer plastics found along the beaches. Furthermore, we infer that coastal communities will use less disposable items because they see first hand the effects of single-use plastics that end up at the beach, and therefore, are more inclined to go reusable.

**Research Question(s):** Following the ban of plastic bags in California and the rising popularity of reusable bags and water bottles, has there been a quantifiable decline in single-use plastic consumerism? If so, is the decline more visible in coastal communities or inland communities?

## Methods

### Data collection approach:

- We developed a nine question questionnaire that asked questions about use of reusable products, opinions about plastics and recycling, and demographic information.
- The survey also asked where the respondent lives, in order to assess variation between coastal and inland populations.

### Types of data collected:

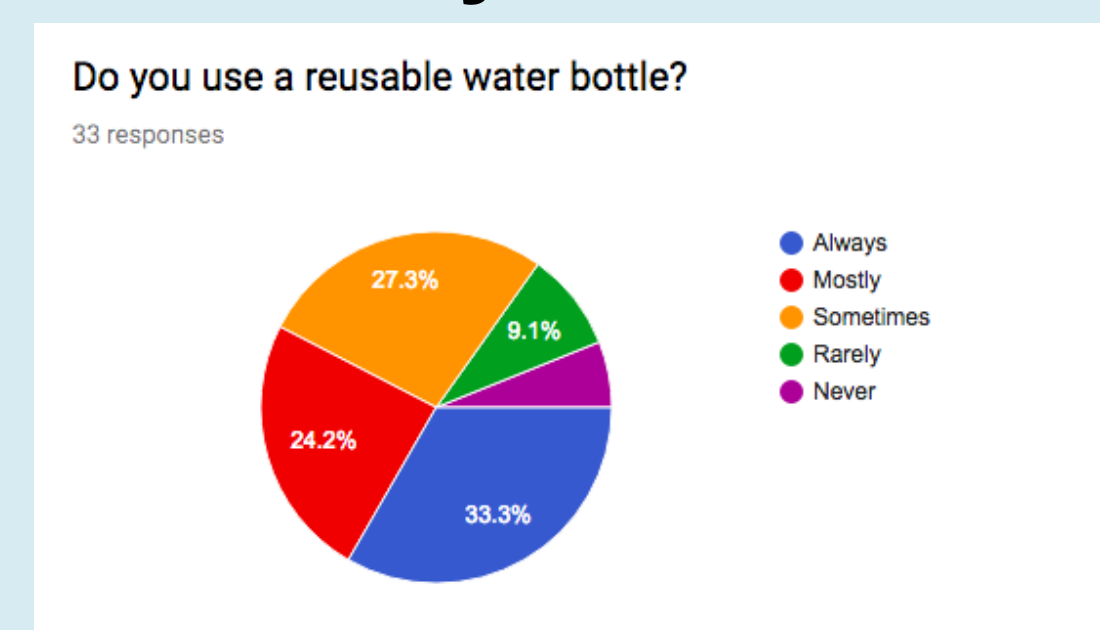
- To date, 38 paper surveys have been collected by intercepting residents at public locations in Los Angeles.

### Analysis of plastic policies that have been enacted on a state and local level

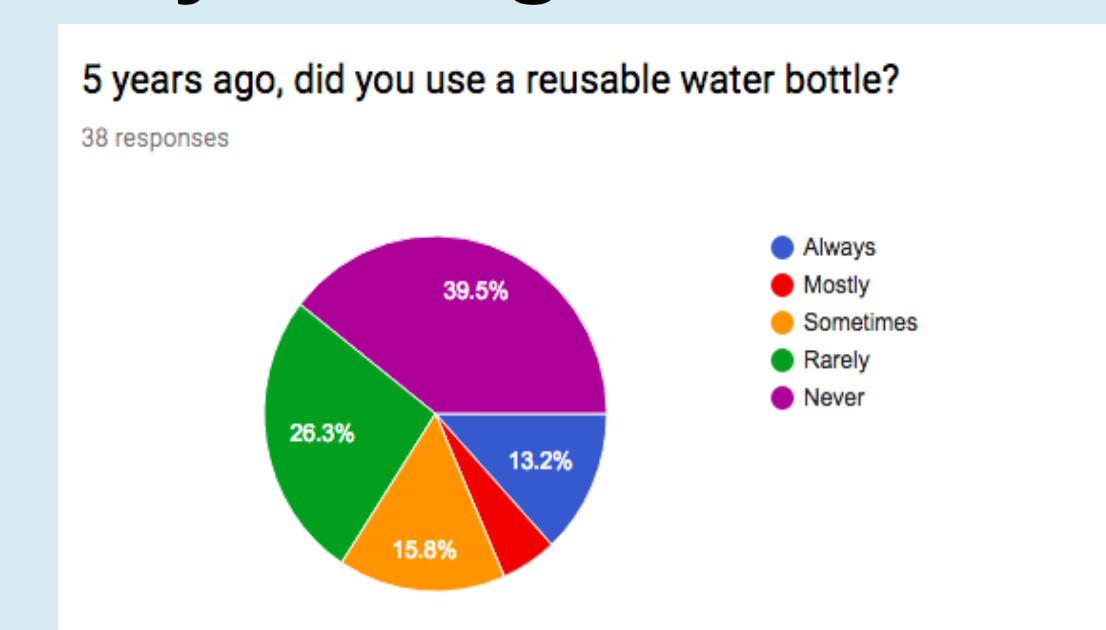
- We analyzed current policies, such as prop. 67, that have been set by the state of California, as well as other districts, to analyze their plastic policies such as state wide plastic bag ban and the city wide ban of Styrofoam takeout containers in Santa Monica. We want to see if these policies have positively impacted the environment.

## Data

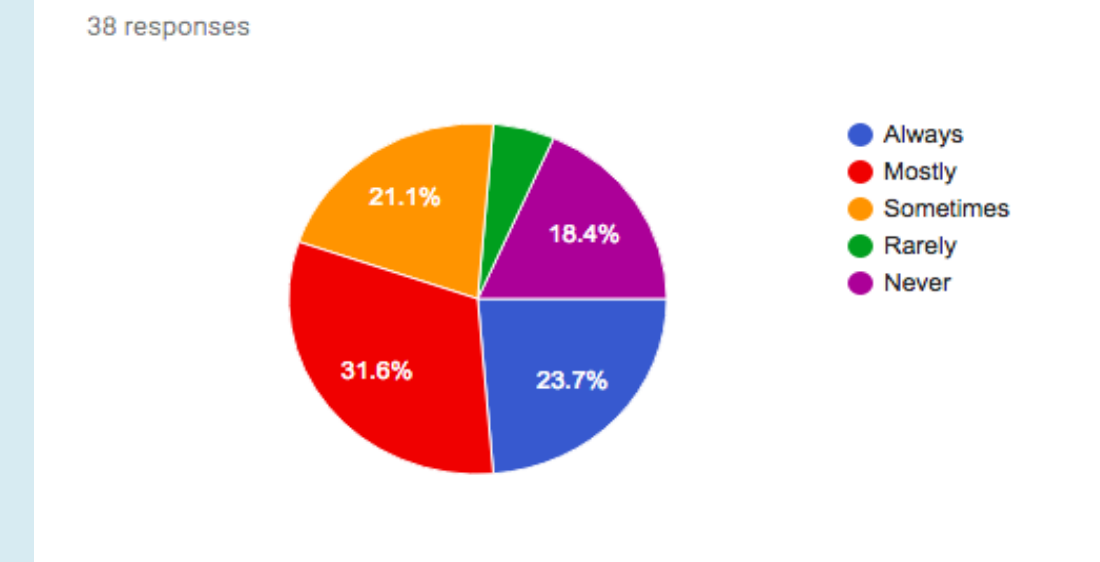
### Currently...



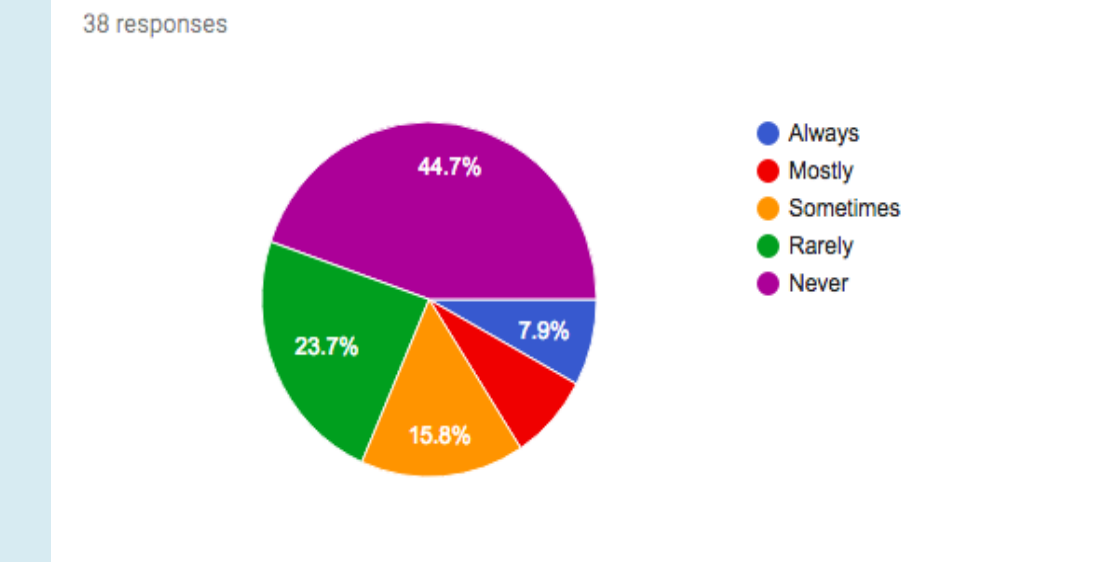
### 5 years ago...



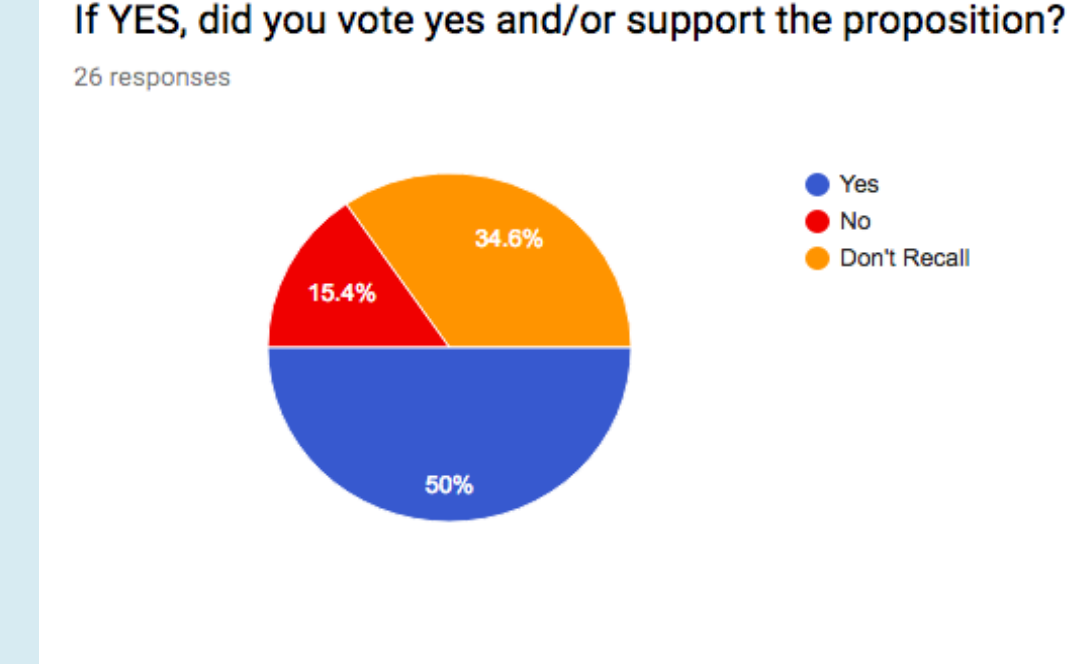
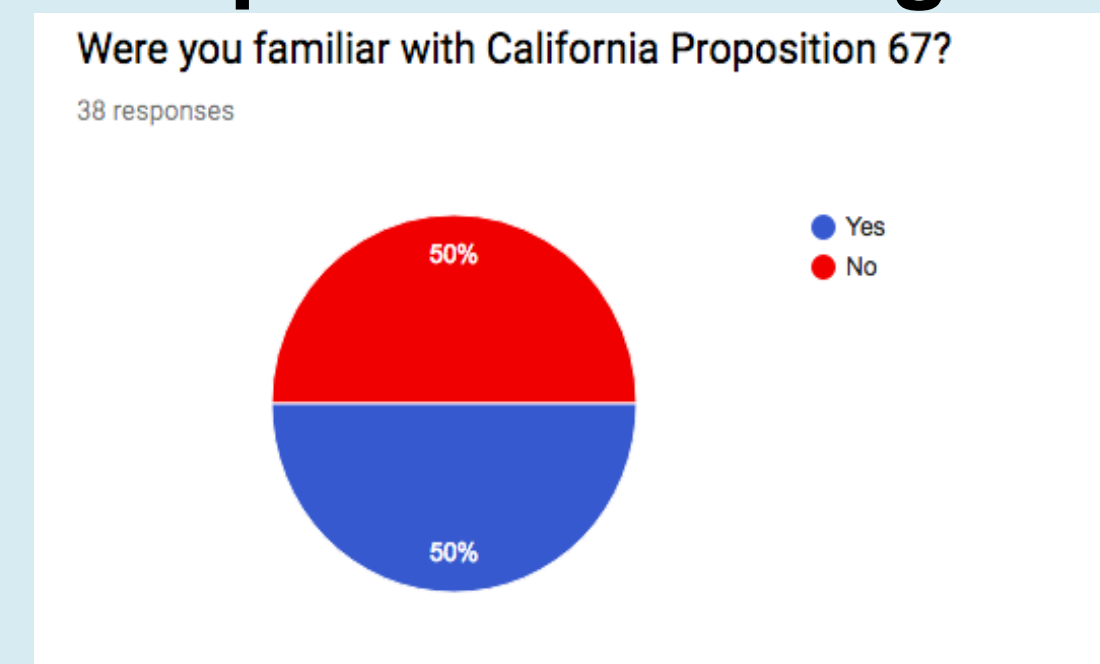
### Do you use a reusable bag when shopping?



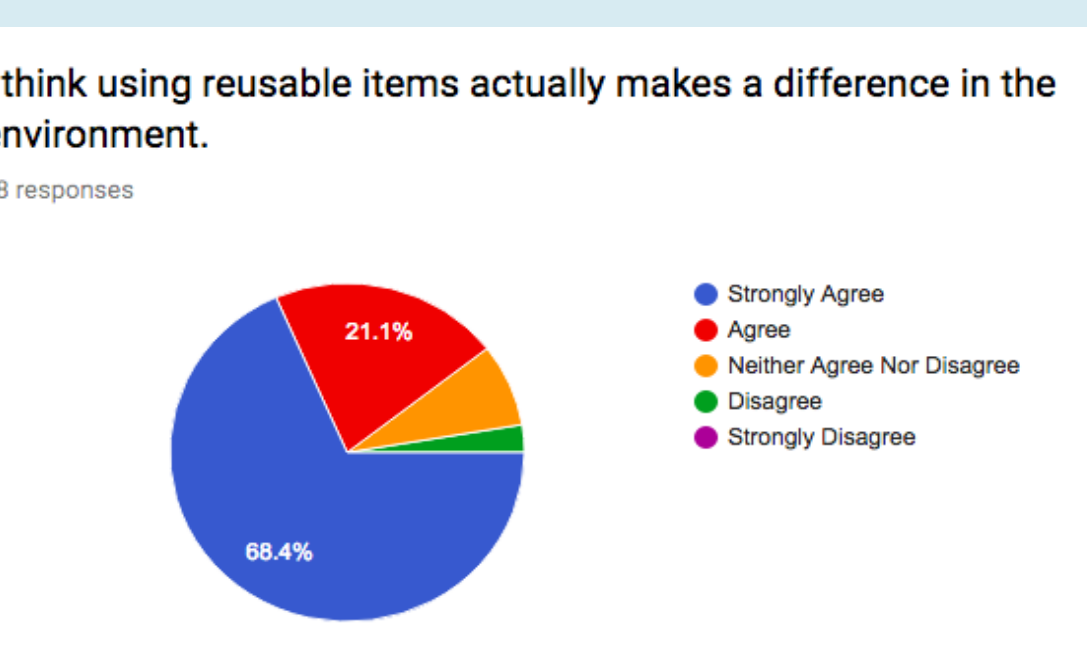
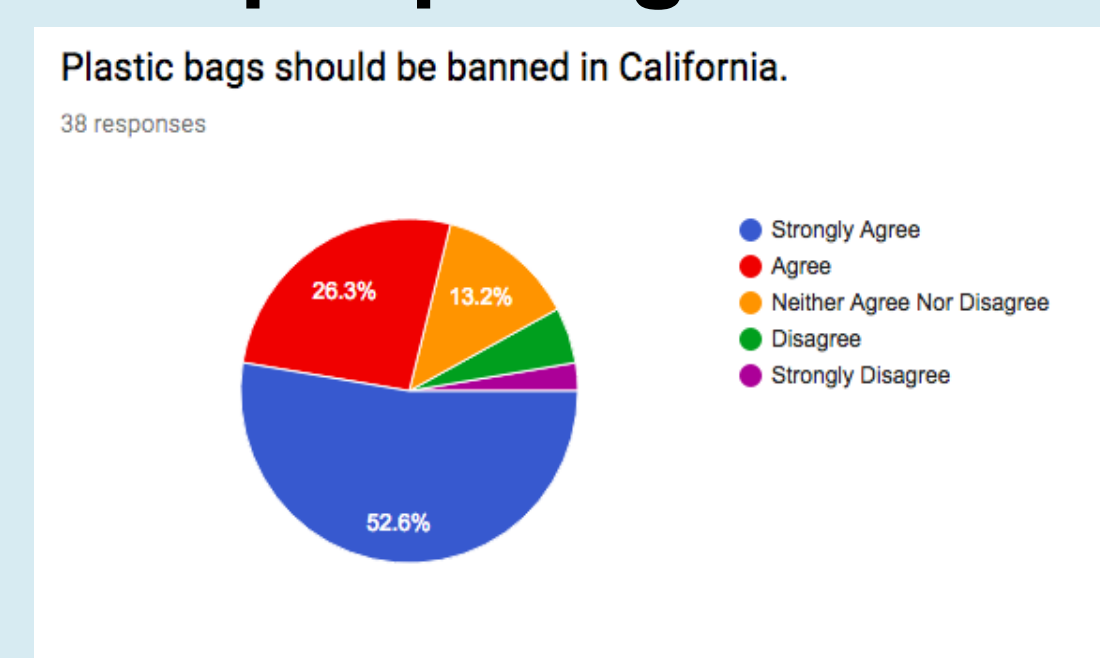
### 5 years ago, did you use a reusable bag when shopping?



### Proposition findings...



### Do people agree with Prop 67?...



## Results

### According to our research...

- 5 years ago 39.5% of those surveyed **never** used a reusable water bottle, while today only 10.5% never use one.
- Over half the people surveyed (52.6%) **strongly agreed** that plastic bags should be banned in California.
- 68.4% of those who took the survey believe that going reusable **actually makes a difference** in the environment.
- A significant amount of those surveyed (50.0%) did not know about **Proposition 67**.
- People are more inclined to use reusable water bottles than reusable bags, with 18.4% of the people surveyed **never** using reusable bags and 10.5% **never** using reusable water bottles.
- Only one person surveyed **strongly disagreed** with banning plastic bags in California.
- The majority (73.7%) of the survey takers believed that they were **saving money** by going reusable.
- Out of the subjects who **mostly** or **always** use reusable water bottles, 68.4% were between 18 and 25 years of age, and 57.9% were over 25 years.
- Of the subjects that are **female**, 64.0% said they use a reusable water bottle and 68.0% said they use reusable bags, whereas of the subjects that are **male**, 38.5% said they use a reusable water bottle and 30.8% said they use reusable bags.

### What we hope to learn in future research...

- To look more deeply into whether or not a quantifiable amount of environmental change can be seen in the environment following Proposition 67, potentially by getting in touch with local beach/community cleanups.
- To expand our research outside of Los Angeles.

## Discussion

- In the future we hope to expand our study from locally to nationally so we can include more states in the U.S. and analyze their plastic policies. We believe that our research is important and can help shed light on the importance of plastic policies on the environment. Furthermore, we hope to expand our scope of research to include other pollution that harms our environment other than plastic. We believe that by doing this research we can help shed light if the use of plastic is decreasing in inland and coastal cities and see if the reason for this decline is because of certain plastic policies that have been implemented.

## Literature Cited

- "California Proposition 67, Plastic Bag Ban Veto Referendum (2016)." *Ballotpedia*.

## Acknowledgements

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