

Pass On Plastic: Community Attitudes and Behaviors Towards Single-Use Plastic Bags and
the Impact of Local Government Legislation

A Thesis

Presented in Partial Fulfillment of the Requirements for the Degree of Master of Science

with a

Major in Environmental Science

in the

College of Graduate Studies

University of Idaho

by

Danielle D. Gentry

Major Professor: Randy Brooks, Ph.D.

Committee Members: Bert Baumgaertner, Ph.D.; John Abatzoglou, Ph.D.

Department Administrator: Randy Brooks, Ph.D.

December 2016

AUTHORIZATION TO SUBMIT THESIS

This thesis of Danielle Gentry, submitted for the degree of Master of Science in Environmental Science and titled “Pass On Plastic: Community Attitudes and Behaviors Towards Single-Use Plastic Bags and the Impact of Local Government Legislation,” has been reviewed in final form. Permission, as indicated by the signatures and dates below, is now granted to submit final copies to the College of Graduate Studies for approval.

Major Professor: _____ Date: _____
Randy Brooks, Ph.D.

Committee Members: _____ Date: _____
Bert Baumgaertner, Ph.D.

_____ Date: _____
John Abatzoglou, Ph.D.

Department
Administrator: _____ Date: _____
Randy Brooks, Ph.D.

ABSTRACT

This research explores discrepancies between the attitudes and behaviors of the community of Latah County, Idaho, towards disposable single-use plastic bags, and Idaho House Bill 372 (HB372). A survey was completed by 271 community members to assess their behaviors and attitudes towards plastic bag usage and legislation. Comparisons were drawn between survey participant responses based on their political affiliation, and it shows that although democratic participants had higher percentages in favor of both voluntary compliance methods as well as legislation restricting plastic bags, the majority republican respondents were also in favor of both. The beliefs and attitudes of all members surveyed in Latah County, despite political affiliation, were not consistent with the restrictions of HB 372. This research supports the idea that local government entities are more suited to support the attitudes and behaviors of communities suggests that restrictive legislation such as HB 372 may hinder desired progressive action.

ACKNOWLEDGEMENTS

There were several organizations and individuals that contributed to the success of this project. First, I would like to thank my major professor, advisor, and friend, Randy Brooks, for giving me the freedom to explore a topic that I am passionate about, and guiding me towards the successful completion of this project. Second, the University of Idaho Sustainability Center gave relentless support and motivation, and encouraged and promoted the Pass On Plastic survey on the University of Idaho Campus. Their partnership was invaluable and appreciated. Additionally, the Sustainability Center funded a mini grant project headed by Katelyn (Kate) Wilcox. Ms. Wilcox had a vision of spreading awareness of plastic consumption, pollution, and how it was effecting the natural environment. The Sustainability Center designed and funded 500 cotton reusable bags for distribution to students and community members to assist Kate in her outreach project. They also helped coordinate a free public film screening of the documentary- Plastic Paradise, which further assisted with public outreach and education. My partnership with Kate on her project and at events dramatically increased awareness of the Pass on Plastic project and raised awareness and participation in the survey.

Lastly, I would like to recognize the City of Moscow Sustainable Environment Commission for their overwhelming support for the Pass on Plastic project. The Commission helped develop the overall idea for the project and provided assistance in development and distribution of the survey.

DEDICATION

I could not have done the Pass on Plastic project without the support of my family, friends, and community. A special thank you goes to my partner, Daniel, my daughter, Makayla, my father, Tom, and my sister, Andrea. You have all gone above and beyond to support me throughout my journey. Your love and encouragement helped make this whole thing possible and I could not have done this without you. It is my hope that this research can encourage progressive action, leading to a more sustainable and fulfilling quality of life for future generations.

TABLE OF CONTENTS

| | |
|--|------|
| AUTHORIZATION TO SUBMIT THESIS | ii |
| ABSTRACT | iii |
| ACKNOWLEDGEMENTS | iv |
| DEDICATION | v |
| TABLE OF CONTENTS | vi |
| TABLES | viii |
| FIGURES | ix |
| CHAPTER 1: LITERATURE REVIEW..... | 1 |
| 1.1 INTRODUCTION | 1 |
| <i>1.1.1 Development and Commercialization of Plastic</i> | 1 |
| <i>1.1.2 Plastic Pollution and its Effects</i> | 1 |
| 1.2 GOVERNANCE OF PLASTIC BAGS | 3 |
| <i>1.2.1 Why Plastic Bags?</i> | 4 |
| <i>1.2.2 Types of Plastic Bag Legislation</i> | 5 |
| <i>1.2.3 Plastic Bag Legislation and Trends in the United States</i> | 7 |
| <i>1.2.4 Impact of Local Government Legislation</i> | 9 |
| <i>1.2.5 Introduction to Idaho House Bill 372</i> | 10 |
| 1.3 STUDY RATIONALE | 12 |
| 1.4 STUDY OBJECTIVES | 12 |
| 1.5 STUDY HYPOTHESES | 12 |
| CHAPTER 2: ATTITUDES AND BEHAVIORS SURVEY | 13 |
| 2.1 INTRODUCTION | 13 |
| 2.2 MATERIALS AND METHODS | 13 |
| <i>2.2.1 Survey Design</i> | 13 |
| <i>2.2.2 Survey Questions</i> | 14 |
| 2.3 RESULTS AND DISCUSSION | 19 |
| <i>2.3.1 Political Affiliation</i> | 19 |
| <i>2.3.2 Income</i> | 21 |
| 2.4 CONCLUSIONS | 23 |
| 2.5 FUTURE RESEARCH | 24 |

| | |
|--|----|
| 2.6 AUTHOR CONTRIBUTIONS | 25 |
| 2.7 CONFLICTS OF INTEREST | 25 |
| REFERENCES | 26 |
| APPENDIX A | 31 |
| APPENDIX B..... | 37 |

TABLES

1. Visible Litter on Rural Interstates and Primary Roads 2

2. Political Affiliation of States With or Without Plastic Bag Ordinances 8

FIGURES

| | |
|--|----|
| 1. Waste Management Hierarchy | 4 |
| 2. U.S. Population Residing in Jurisdictions with Plastic Bag Ordinances | 7 |
| 3. Idaho county results | 11 |
| 4. Question 1 Response Frequencies | 14 |
| 5. Question 3 Response Frequencies | 15 |
| 6. Question 4 Responses | 16 |
| 7. Voluntary Compliance Versus Legislation | 17 |
| 8. Perceptions of Benefits and Drawbacks | 18 |
| 9. Political Affiliation of Respondents | 19 |
| 10. Political Affiliation and Voluntary Compliance | 20 |
| 11. Political Affiliation and Legislation | 20 |
| 12. Political Affiliation and Importance of Reduction | 21 |
| 13. Household Income of Respondents | 22 |
| 14. Household Income and Reusable Bags | 22 |
| 15. Household Income and Legislation | 23 |

CHAPTER 1: LITERATURE REVIEW

1.1 INTRODUCTION

Plastic- one of the 21st century's most widely utilized materials. It was commercialized with the envisioned potential to replace the usage of other materials due to its unique properties. However, the chemical composition of plastic also gives it unique properties that have caused it to become a global concern to environmental and human health. Plastic litter is continually accumulating at an alarming rate on landscapes and in waterways. Research shows that despite the many benefits plastic has brought to modern society, it is also starting to raise concern that is being recognized and combated by government agencies around the world.

1.1.1 Development and Commercialization of Plastic

Plastic was originally commercialized with the intent of replacing the use of materials such as wood, metal, and glass. Durability, versatility, reliability, and convenience have made plastic a popular material in nearly every industry in the marketplace (Thompson, Moore, Vom Saal, & Swan, 2009). Improved medical supplies, extended life of food, lightweight vehicles, and inexpensive footwear and clothing are just a few examples of how society has benefited from the integration of plastic products (Andrady & Neal, 2009). Plastic bags were introduced into retail stores in the 1970's, and by 1990 made up over half of the bags distributed at checkout stands (Petroski, 2003). Replacing or supplementing paper bags, plastic alternatives have a lightweight, compact, and flexible nature to them that allows convenient and time-saving solutions to shopping annoyances (Petroski, 2003). However, plastic bags have an estimated consumption rate of over 100 billion plastic bags per year used in the United States alone (Larsen & Venkova, 2014). High consumption rate combined with inappropriate care and disposal of the product has contributed to an unsustainable, increasing rate of plastic pollution and contamination to landscapes and waterways causing global environmental concern.

1.1.2 Plastic Pollution and its Effects

Plastic is a man-made synthetic material derived from an organic base, such as oil or natural gas (Morris & Chistensen, 2014). Its unique composition makes it resistant to

biodegradation. Rather, the material photodegrades. Photodegradation is the process of sunlight breaking apart molecular bonds from each other resulting in smaller and smaller pieces of the material. Unlike biodegradation, photodegradation does not break down the material back into its original separate organic base (Yousif & Haddad, 2013). Even plastics that are biodegradable take specific conditions and considerable time to break down causing their presence in the natural environment to have persistent lifecycles and harmful effects (Hopewell, Dvorak, & Kosior, 2009).

Over 30 million tons of plastic waste was generated in the United States in 2013, which made up over 12 percent of all municipal solid waste as reported by the United States Environmental Protection Agency (EPA). This is an increase from only 0.4 percent in 1960 (The United States Environmental Protection Agency, 2015). Common products consumed in the United States include cling wrap, sandwich bags, and plastic grocery bags. Lack of proper management of products has caused plastic to become litter that scatters throughout landscapes and waterways.

Table 1: Comparison of 1969 and 2009 Study Results: Visible Litter on Rural Interstates and Primary Roads [1] (Mid Atlantic Solid Waste Consultants, 2009)

| Material | Change in Litter |
|-------------------------|------------------|
| Paper | -78.9% |
| Metal | -88.2% |
| Plastic | 165.4% |
| Misc | 13.1% |
| Glass | -86.4% |
| Total | -61.1% |
| Beverage Containers [2] | -74.4% |

[1] The results in this table are based on a comparison of the results of the 1969 and 2009 National Litter Studies. In order to enable reasonable comparisons, the 1969 Study data was statistically adjusted to capture only the first 15 feet of the right-of-way, and results were also normalized to account for the 50 percent growth in population that occurred from 1969 to 2008.

[2] Beverage containers were segregated in both the 1969 and 2009 Studies and are shown separately.

Reports go back over a decade on the harm plastic pollution has caused to oceans and marine life. The buoyancy of various plastic products has it floating or suspended at different depths in ocean waters. It is estimated that upwards of 35,000 tons of plastic contaminate the top surface layer of the oceans alone (Cózar, et. al., 2014). The color and variety of sizes and

shapes of the pieces is commonly mistaken to be food by marine life and is consumed. Freshwater pollution may cause similar issues as marine pollution. A study conducted on the beaches of Lake Huron, Canada, measured levels of plastic pollution on the shores and showed that the quantity was comparable to that found on ocean shores (Yousif & Haddad, 2013). Freshwater contamination has also become a recognized issue in the United States, which has led to impact reports resulting in government agencies taking action to reduce plastic pollution.

Plastic pollution is not limited to waterways. Since the 1960's, plastic pollution seen on roadways has increased by over 160% (Table 1). According to the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals, more than half of the chemicals used to make plastic can be toxic if absorbed or ingested (Rochman, 2013). Plastic materials act as a magnet for other pollutants in the environment. Toxins will attach themselves to the molecules and once ingested, stomach acid breaks the bond of those toxins to the plastic, which is then absorbed by the organisms' tissue (Barclay, 2013). Marine life has suffered greatly due to plastic contaminating ocean waters. "More than one million seabirds and 100,000 marine mammals die every year from ingestion or entanglement of plastics" (M.J., 2010). Marine life shows an increased rate of consumed plastic particles and the harmful effects of this are being realized around the world as food sources are depleting in both quantity and quality (Rochman, 2013). This has caused concern for animal welfare, biodiversity, and food source quality and security.

1.2 GOVERNANCE OF PLASTIC BAGS

It is undeniable that plastic has brought an array of benefits to modern society. However, as research supports, plastic also poses many concerns to the natural environment, animal and human health, and future wellbeing of global sustainability. In efforts to minimize negative effects of plastic, policies are increasing in popularity internationally, including local and sub-national policies being implemented throughout the United States. One commonly focused on product for legislation is the single-use disposable plastic carryout bag.

1.2.1 Why Plastic Bags?

Plastic bags make up an insignificant portion of municipal waste generated in the United States (Morris & Chistensen, 2014).

However, emphasis on plastic bag regulation has taken place for a variety of reasons. First, although nationally plastic bag waste generation is comparatively insignificant, it has high impacts on certain regions that raise concern regarding continued use of the

products. Local efforts to research the effects of plastic bags in their area help determine if an ordinance regulating plastic bags in that jurisdictional area would be beneficial. The 2008 Anaconda River Trash Study revealed that plastic bags made up a high percentage of the litter found along the shores of running waterways that surround Washington, DC (Anaconda Watershed Society, 2008). This report resulted in the Anaconda River Clean Up and Protection Act of 2009 banning disposable plastic bag distribution and requiring a fee on other distributed disposable bags within the district with the intent to discourage use (District of Columbia Official Code, 2015).

Second, recycling plastic bags has not proven to be efficient, nor effective in reducing pollution. This is in part due to complex chemical compositions, unmanageable thin film, and high contamination resulting in the inability to recycle the majority of plastic bags (Waste Management, 2016). Additionally, research shows that less than 12% of plastics are recycled (United States Protection Agency, 2015). Even if plastic bags could readily be recycled, it is unlikely that an increase in recycling would be enough to create a significant decline in plastic waste and pollution. The EPA recommends source reduction as the most efficient method of reducing the amount of municipal waste generated (Figure 1). “Source reduction conserves resources and energy, usually costs less, and reduces marine debris” (EPA, 2016). The EPA



Figure 1. Waste Management Hierarchy. This figure shows the preferred methods of managing municipal waste generation, showing source reduction and reuse as the most effective method (EPA 2016).

also specifically names legislation on reducing single-use disposable plastic bags as progressive action towards reducing packaging material waste generation (EPA, 2016).

Third, no infrastructure or technological implementations or advancements are needed to eliminate plastic bags from retail stores. Plastic bags were commercialized and integrated into the daily lives of consumers a relatively short time ago. Paper bags and reusable bags were used instead of plastic bags just half a century ago (see Chapter 1.1.1), and the infrastructure to accommodate those alternatives has not disappeared. Often, expensive, large-scale technological advancements need to be incorporated to make large-scale changes, but in the case of eliminating plastic bags, minimal resources would be needed.

1.2.2 Types of Plastic Bag Legislation

Hundreds of ordinances are in effect regarding plastic bags (see Appendix A). Variations in how regions implement regulation are unique approaches that are customized for the jurisdictional region they encompass. The current trends in regulation include plastic bag bans, fees, and taxes. Additionally, certain regions have implemented programs that encourage voluntary compliance instead of or in conjunction with government regulation through public outreach and education programs. Along with progressive action in the form of legislation or education, there is also a movement promoting the benefits of plastic bags and argues against any encouragement to reduce or discontinue usage.

Plastic Bag Bans

One of the popular approaches to government regulation on plastic consumption is prohibiting the distribution of plastic bags within the jurisdictional region. Some ordinances prohibit distribution of plastic bags, while others restrict certain types of plastic bags, or restrict only qualifying entities from distribution. The City of Chicago (Article XXIII) restricts stores from providing plastic carryout bags to customers (American Legal Publishing Corporation, 2013), while Seattle has banned plastic bags under 2.25 mil thick (Bureau of Planning and Sustainability, 2012). San Francisco's original ordinance restricted large grocery stores and pharmacies from distributing plastic bags in 2007, which was expanded in 2012 to incorporate additional retailer locations (Bureau of Planning and Sustainability, 2012).

Fees and Taxes

Implementing fees or taxes on bags is another route that government agencies commonly take. Ordinances may require distributors to charge consumers a small fee or tax, usually per bag, in order to distribute them. These fees or taxes are seen on plastic, paper, and reusable bags depending on the area (National Conference of State Legislatures, 2016). The funds generated by these ordinances go towards a variety of recipients including government agencies, non-profit organizations, research, recycling, and cleanup initiatives to name a few (S. Walter Packaging, 2016). Fees and taxes have been implemented as stand-alone ordinances as well as in conjunction with other restrictions such as bans or recycling regulations.

For example, the “Bring Your Own Bag Ordinance” of the City of Cambridge, Massachusetts, restricts the distribution of single-use plastic bags, while requiring a fee to be charged on alternative carryout bags distributed to consumers upon checkout. This ordinance is partnered with a third type of ordinance trend- public outreach (City of Cambridge, 2015).

Public Outreach

Public outreach is not always approached along with government enforcement but some ordinances have been passed that require it to be incorporated in some form. Outreach may include public education requirements, recycling ordinances, or incentive programs that are aimed towards making the public aware of the perceived problem with disposable plastic bag usage, and encouraging discontinued usage via means other than bans, fees, or taxes on plastic bags directly (Campbell & Watson, 2011).

The County of Los Angeles initially implemented a voluntary Single-Use Bag Reduction and Recycling Program and the Brag About Your Bag Campaign in 2008. Upon reevaluation of the campaign, it was realized that it was failing to meet the reduction goals of the region. The county continues the program; however, additional measures were taken and a plastic bag ban was subsequently imposed in 2010 (County of Los Angeles, 2010). Although the importance of public outreach should not be undermined, history suggests that it alone will not be enough to tackle the issues associated with plastic bag usage.

Anti-Plastic Bag Ban Movement

There are also several groups involved in a movement to stop regulations restricting plastic bags. NOVOLEX™, a plastic bag manufacturing company with a large manufacturing plant in southern Idaho, is a member of The American Progressive Bag Alliance. As a member, the company serves as “the frontline defense against plastic bag bans and taxes nationwide.” The alliance supports and promotes programs that educate the public and implement resources for reusing and recycling plastic, instead of reducing use (NOVOLEX, 2016). Although there is a considerable amount of progressive action taking place in the United States to reduce plastic bag usage, there are also efforts to fight ordinances and encourage continued use.

1.2.3 Plastic Bag Legislation and Trends in the United States

There are currently over 200 city and county ordinances in place regarding plastic bags in the United States alone (see Appendix A). The population of citizens who reside in areas with plastic bag ordinances has risen from less than one million in 2009 to over 35 million in 2015, with projections of over 50 million by the end of 2018 (Figure 2). The first ordinances were passed in 2009, and currently, there are ordinances passed to take effect as far out as 2018. Populations are estimated for years 2016, 2017, and 2018 based on currently passed ordinances and those numbers are expected to grow, as more ordinances are passed.

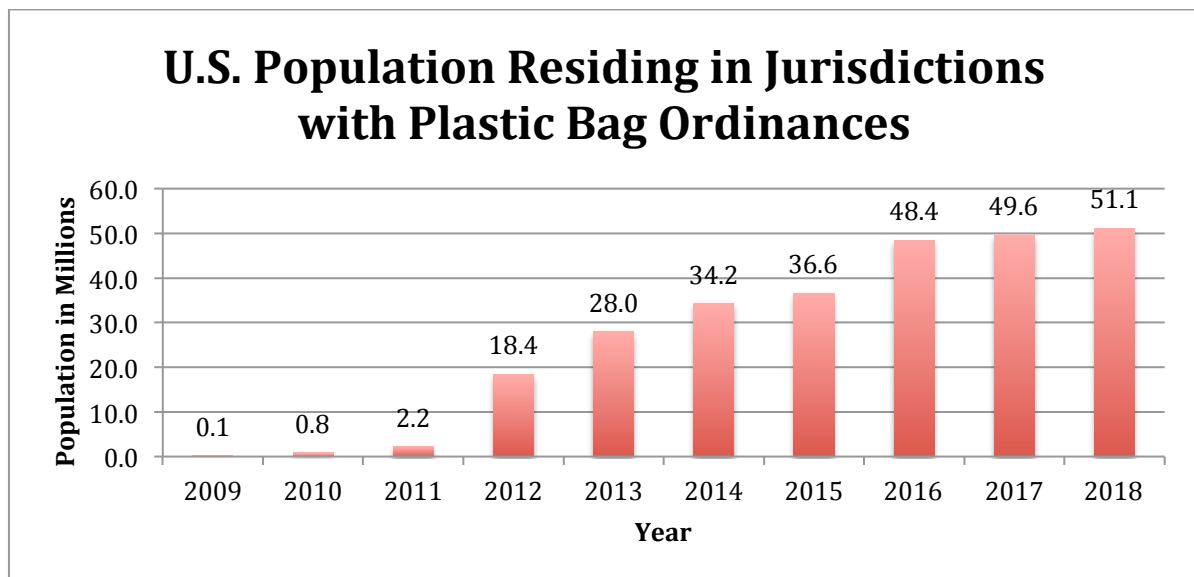


Figure 2. U.S. Population Residing in Jurisdictions with Plastic Bag Ordinances. The estimated population in the United States that resides in jurisdictional regions that have passed ordinances restricting the use or distribution of disposable plastic bags (see Appendix A for detailed data).

Table 2 shows a list of states that have passed ordinances restricting the use or distribution of plastic bags in some way. The chart is divided to categorize states by political affiliation, as well as if they have active ordinances. States listed with ordinances are those with one or more active ordinances restricting plastic bags. This list does not include pre-emptive bills as those ordinances prohibit regulation on plastic bags (National Conference of State Legislature, 2016).

Table 2. Political Affiliation of States With or Without Plastic Bag Ordinances.

| Political Affiliation of States ^[1] With or Without Plastic Bag Ordinances ^[2] | | | |
|--|----------------|--------------------|--------------|
| With Ordinances | | Without Ordinances | |
| Democratic | Republican | Democratic | Republican |
| California | Alaska | Delaware | Alabama |
| Colorado | North Carolina | Florida | Arkansas |
| Connecticut | South Carolina | Iowa | Georgia |
| District of Columbia | Texas | Nevada | Idaho |
| Hawaii | | New Hampshire | Indiana |
| Illinois | | Ohio | Kansas |
| Maine | | Pennsylvania | Kentucky |
| Maryland | | Vermont | Louisiana |
| Massachusetts | | Virginia | Mississippi |
| Michigan | | West Virginia | Missouri |
| Minnesota | | Wisconsin | Montana |
| New Jersey | | | Nebraska |
| New Mexico | | | North Dakota |
| New York | | | Oklahoma |
| Oregon | | | South Dakota |
| Rhode Island | | | Tennessee |
| Washington | | | Utah |
| | | | Wyoming |

[1] Reference: (NBC News, 2016)

[2] Reference: Appendix A

It is not unlikely that regions tend to have similar political views over the years, and therefore affiliate with the same political party year after year. The specific political categorization in the table is from the 2012 presidential election. Seventy-five percent of states affiliated with voting republican in 2012 do not have plastic bag ordinances restricting

plastic bags, while only 42 percent of democratic states are without ordinances (Table 2). The results from the table suggest that predominantly republican areas are less likely to be in favor of plastic bag legislation.

1.2.4 Impact of Local Government Legislation

In the United States and around the world, the variation of plastic bag legislation- from recycling programs and requirements, to fees and bans, each is unique for that area of jurisdiction. Although some national ordinances are successfully in place, large-scale jurisdictional restrictions in the United States have not been successful thus far.

For example, in 2009, Bethel, Alaska, passed the state's first ordinance regarding plastic bags, banning them from the city. Two additional cities, Homer and Hooper Bay, passed ordinances in 2012, one placing restrictions while the other banned bags. Further, Fairbanks proposed an ordinance in 2009 that failed to pass. Finally, a state bill (HB1043) was proposed in 2012, which failed despite the state's successful local ordinances that are in place (S. Walter Packaging, 2016).

After over eighty-five local regulations or restrictions had been put in place in California, the state pushed for a statewide ordinance on single-use carryout plastic bags, which was passed in 2014. California Senate Bill 270 was passed with the intention of creating future regulation uniformity. Along with the co-benefits, this bill presented, it was also accompanied by concerns. One major opposition argument stated "[t]his bill eliminates the ability of a local government to exercise its own discretion based on the unique needs and business climate of each" (Padilla, 2014). California Senate Bill 270 was passed with an effective date of July 1, 2015. However, in February of 2014, enough signatures were gathered to force a referendum on the bill and require it to be put to a public vote (Padilla, 2014). This exemplifies how despite a high magnitude of local ordinances in effect throughout the state of California, a statewide bill was not effective in fitting the needs of the entirety of the region.

Local government development of plastic bag restrictions allows for customization of the ordinance, or lack of, in order to meet the needs and desires of local economy and citizens, and allows for flexibility to control changes over time. Several states have presented statewide ordinances, but the only successfully adopted policies to date have been city and countywide.

Despite state trends supporting or opposing plastic bag ordinances (Table 2), challenges arise when attempting to create a policy that is sufficient for a large jurisdictional region, such as a statewide ban in California. As exemplified above, each jurisdictional region has different behaviors and attitudes towards plastic bags and legislation, making it challenging to gain significant support of citizens to successfully implement a policy covering a large region.

1.2.5 Introduction to Idaho House Bill 372

Despite how local government has proven to play a vital role in the progressive movement towards reducing or eliminating plastic waste and pollution, certain regions have placed regulations restricting local government agencies from passing regulation on plastic bags. The State of Idaho, specifically, has restricted all local government regulation of any type of auxiliary container, including plastic bags. In January 2016, Idaho House Bill 372 (HB 372) was first brought to the Idaho State Legislature and two months later was signed and passed. It took effect in July of that year.

“The purpose of this legislation is to ensure the uniform and prudent regulation of auxiliary containers. This law would require that any regulation or taxation of auxiliary containers be done by the legislature, not by individual political subdivisions of the state”
(Kauffman & Patrick, n.d.).

HB 372 prohibits Idaho local government from passing regulation (prohibition, restriction, fee imposition, or taxation) on plastic bags (Idaho Legislature, 2016). The authors of the bill argue that local economy is sensitive to this type of regulation and that it could cause confusion if not a statewide implementation (Legislature of the State of Idaho, 2016). However, other states have encountered a lack of support for statewide legislation and local regulations have proven to be more understanding of local needs and have been more successful at passing and helping the jurisdictional region reach its goals.

Wood River High School Environmental Club, headed by Lex Shapiro (Robinson, 2011), attempted to push for a plastic bag ban in Hailey, Idaho, in 2011 (Koch, 2011). The ban was not passed; yet despite fighting an overwhelming monetary fight against Hilex Poly (a branch of NOVOLEX, with a large manufacturing plant in Southern Idaho), the high school students were able to get a 42 percent vote in support of the local ban (Robinson, 2011). Hilex

Poly fought the ban arguing, "Not only is it buying locally but it's really doing the best option for environmental stewardship" (Koch, 2011). The argument of Hilex Poly encouraging economical and environmental benefits by allowing plastic bags was negated by research showing that there is a low percentage of plastic bags distributed in Idaho that are supplied by Hilex Poly (Robinson, 2011). The situation in Hailey, Idaho, shows that there are residents of the state that support plastic bag legislation, and suggests that HB 372 is not inclusive in the attitudes of all regions.

As section 1.2.4 suggests, political affiliation differences may be associated with the support or opposition towards plastic bag regulation in a region. The state of Idaho typically reflects attitudes associated with the Republican Party. However, Hailey, Idaho, is located in Blaine County, which has historically associated with the Democratic Party (NBC News, 2016). Latah County has also historically affiliated with the Democratic Party (see Figure 3). This affiliation may reflect that HB 372 does not support the behaviors and attitudes of Latah County.

Idaho county results

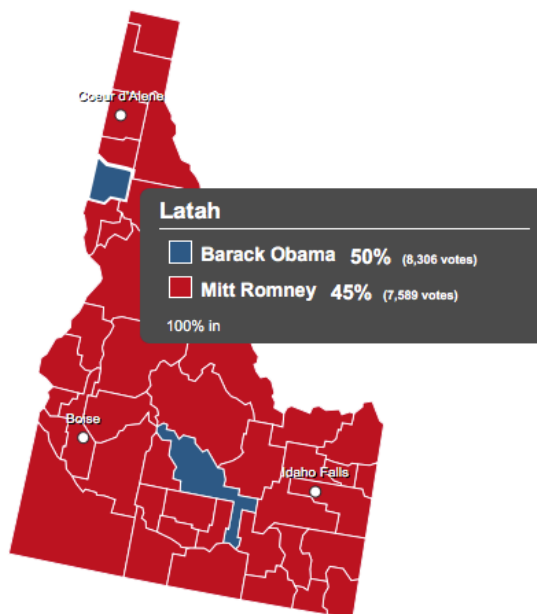


Figure 3. Latah county results. This map shows the breakdown of how individual counties voted in the 2012 presidential election. Although Idaho electoral votes went republican, as they historically do, Latah County had a democratic popular vote (NBC News, 2016).

1.3 STUDY RATIONALE

To gain an understanding of how Idaho House Bill 372 may affect local areas, it is important to gain information on how the public feels about the topic. Latah County, Idaho, is a historically democratically affiliated area and by surveying a sample of the local population, it will help provide an understanding the behaviors and attitudes residents have towards the usage and legislation of plastic bags and if they are consistent with predicted political trends.

1.4 STUDY OBJECTIVES

The objectives of this research were to: (1) survey a small representative sample of the population that resides in Latah County to obtain a better understanding of how the local population feels about plastic bag usage and pollution, and (2) examine the results of the survey and infer whether or not Idaho House Bill 372 infringes on or is inclusively representative of the beliefs of that population sample.

1.5 STUDY HYPOTHESES

The hypotheses of this study are: (1) that the sample population surveyed will have a strong opinion either for or against plastic bag usage and regulation, and (2) that certain inferences can be drawn about how Idaho House Bill 372 is going to affect Latah County in the future. The county has traditionally voted democrat while the majority of the state has leaned republican. It can be assumed that based on trends of plastic bag ordinances would be more popular and accepted in traditionally democratic regions. Therefore, it is predicted that Latah County would be in favor for plastic bag legislation and would not have opinions that correspond with Idaho House Bill 372.

CHAPTER 2: ATTITUDES AND BEHAVIORS SURVEY

2.1 INTRODUCTION

“The purpose of the survey is to produce statistics, that is, quantitative or numeric descriptions, about some aspects of the study population” (Fowler, 2013). Surveys can be used to fill information gaps that other research methods are unable to gather. The purpose of the Pass on Plastic survey was to gain information about the attitudes and behaviors that each individual respondent reflects and to recognize trends in information shared by a group of community members. The Pass on Plastic survey was conducted with the purpose of gathering information pertaining to the attitudes and behaviors of members of Latah County, Idaho, toward disposable single-use plastic bags. Trends in data concluded that the majority of community members agreed in their attitudes relating to environmental concern, voluntary compliance, and government regulation. Further analysis filtered responses comparing respondents with different political affiliation and income levels. It is then concluded that Idaho House Bill 372 (HB 372) is not representative of the members of Latah County and their attitudes towards reducing the usage of plastic bags. The Pass on Plastic survey allowed respondents to give specific information about their behavior, attitudes, and opinions towards plastic bags by asking a variety of questions that related to usage, legislation, and related concerns or benefits.

2.2 MATERIALS AND METHODS

2.2.1 Survey Design

In order to simplify gathering survey responses, collect and analyze data, and keep responses anonymous, an online host website was used to create and distribute the survey (www.surveymonkey.com). Dr. Randy Brooks, the University of Idaho, and the City of Moscow Sustainable Environment Commission reviewed the survey questions. Dr. Brooks provided insight on survey questions and ensured that all topic areas were covered for the purpose and goal of this survey. The University of Idaho International Review Board (IRB) reviewed the questions to ensure they were appropriate for research purposes and for the intended audience of the survey. Additionally, the survey was taken to the Sustainable Environment Commission board members for their feedback. The Commission assisted to

ensure questions were appropriate and covered areas of concern that the city had on the topic of plastic bag regulation and how it would affect the community.

The survey was open from April through October 2016, collecting responses from 401 people. However, responses were filtered by zip code for the purpose of obtaining data only pertaining to residents in Latah County, Idaho. Incorporated cities within Latah County include Moscow (county seat), Bovill, Deary, Genessee, Juliaetta, Kendrick, Onaway, Potlach, and Troy (Idaho, n.d.). Corresponding zip codes for those cities are 83843 and 83844, 83806, 83823, 83832, 83535, 83537, 83855, 83855, and 83871. A total of 271 responses matched the filtered zip code demographics (Appendix B). Those responses were used for the results and analyses. Additional filters were applied to the data to draw further conclusions (section 2.4).

2.2.2 Survey Questions

Question 1

The first survey question asked, “What type of bags do you use while shopping in your community?” This question was asked to get an understanding of how often the respondents claimed to use disposable plastic bags in comparison to alternatives. Results showed that reusable, paper, and disposable plastic bags were used at similar frequencies (Figure 4).



Figure 4. Question 1 Response Frequencies. “What type of bags do you use while shipping in your community?” Respondents answered that they use reusable, paper, and plastic bags at similar frequencies.

Question 2

Consumers who do not own their own reusable bags do not have many options besides using what is offered by the retailer to carry out their purchased goods. After asking what types of bags surveyors used, they were asked, "do you own any reusable bags?" This would help draw conclusions if people used bags that were provided by retailers if they did so because they did not own their own bags. Over 86% of respondents replied that they own reusable bags, however, only 24.6% of respondents replied to Question 1 stating that they use reusable bags all of the time.

Question 3

As stated in Chapter One, plastic waste generation and pollution are some of the reasons plastic usage raises environmental concern. The third survey question gathered information on how respondents use or dispose of plastic bags if they do use them. Respondents said they [initially] reuse the bags in some way more often than they recycle them or throw them away (Figure 5).

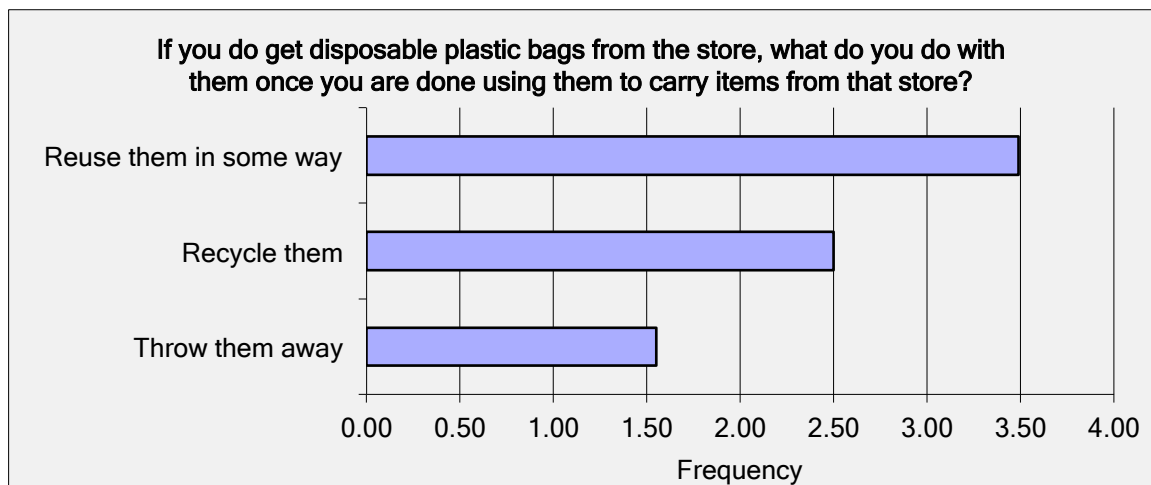


Figure 5. Question 3 Response Frequencies. "If you do get disposable plastic bags from the store, what do you do with them once you are done using them to carry items from that store?" Respondents answered that they mostly reuse them in some way.

Question 4

After gathering an understanding of the plastic bag usage habits of the surveyors, it was important to ask how they felt about plastic bag usage. The majority of respondents, 250 of the 271, felt that it is important to reduce the use of plastics due to harmful environmental impacts on our environment (Figure 6).

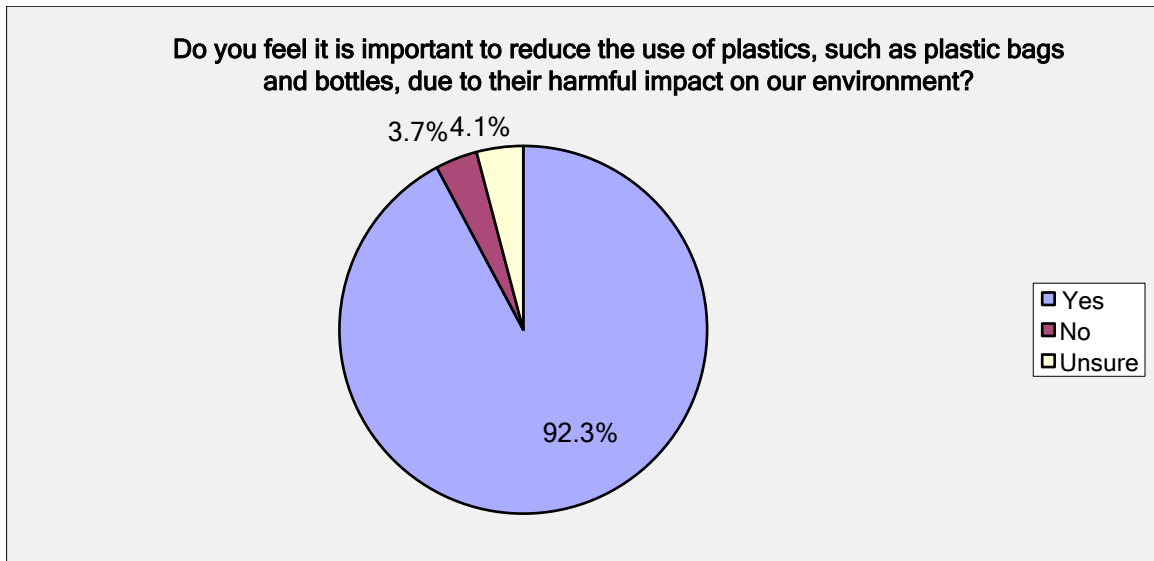


Figure 6. Question 4 Responses. "Do you feel it is important to reduce the use of plastics, such as plastic bags and bottles, due to their harmful impact on our environment?" Over 90% of respondents replied "Yes."

Information was gathered about if respondents thought reducing plastic waste is important, as well as understanding how they feel about different methods of reducing plastic waste. The following two questions were asked to get an understanding of how surveyors felt about voluntary compliance and government regulation reducing the consumption of plastic bags.

Question 5 & Question 6

Seventy-five percent of respondents replied "Yes" when asked if they would voluntarily discontinue their use of new disposable bags, and 82% said they would support a law banning disposable bags at retail stores if they provide an alternative method of transporting goods (Figure 7). This is significant because it suggests that the majority of Latah County residents would be in support of a plastic bag ordinance.

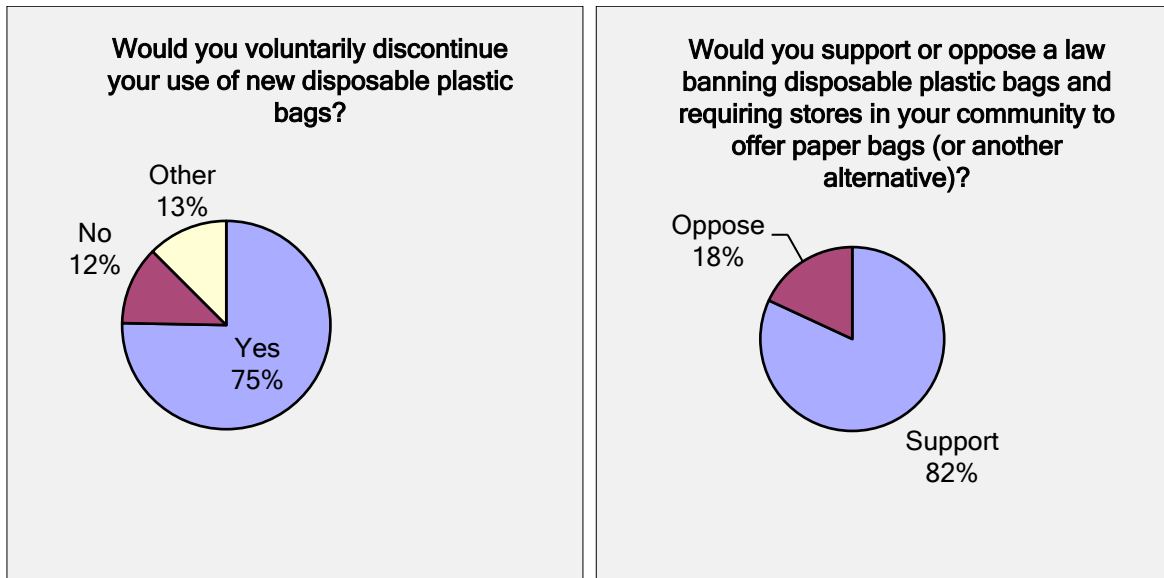


Figure 7. *Voluntary Compliance Versus Legislation.* Respondents were asked “Would you voluntarily discontinue your use of new disposable plastic bags?” and “Would you support or oppose a law banning disposable plastic bags and requiring stores in your community to offer paper bags (or another alternative)?” The majority of respondents were in favor of both voluntary compliance and government legislation in efforts to reduce plastic bag usage.

Questions 7 & 8

The following two questions were asked to gather supplemental information of why respondents would favor or oppose reducing the use of plastic bags. Surveyors were asked what potential benefits or drawbacks their community might encounter from reducing or eliminating disposable plastic bags in categories such as environmental, economical, and social. The most popular responses predicted environmental benefits (93%), while not seeing any drawbacks (44.5%) from the reduction of plastic bags (Figure 8).

Demographics

Following the questions pertaining to plastic bags, surveyors were also asked to provide basic demographic information for comparison purposes. Information was gathered on zip code of residence, age, education level, occupational status, and political affiliation. Filters were applied to results using demographic information to further analyze results, which are discussed in Section 2.4.

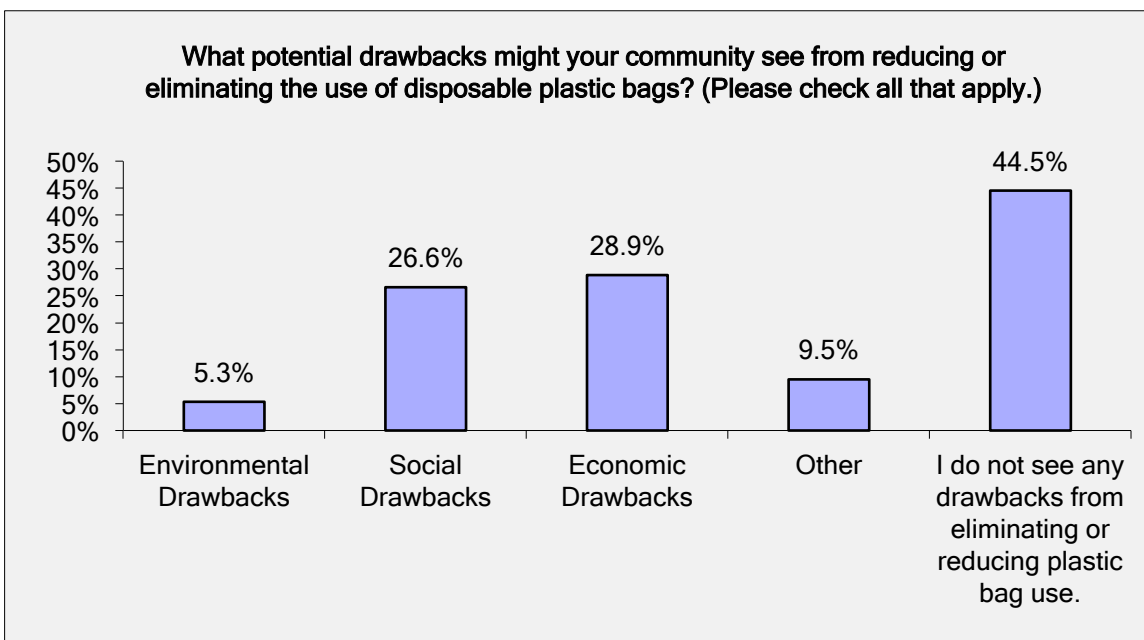
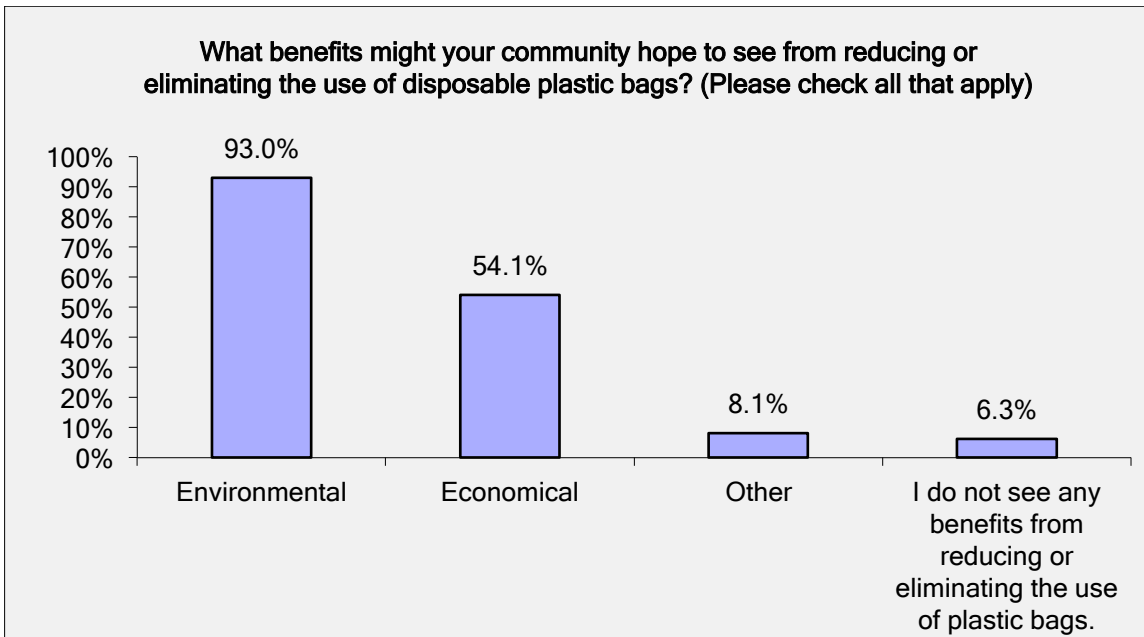


Figure 8. Perceptions of Benefits and Drawbacks. Respondents were asked if they perceived there to be any potential benefits of drawbacks of reducing or eliminating the use of disposable plastic bags in their community. The most common responses saw environmental benefits and no drawbacks.

Additional Questions or Comments

Lastly, surveyors were given the opportunity to leave any additional comments or questions that they had regarding the topic at hand. Several comments noted that they reuse plastic bags for one reason or another and would have a hard time giving them up entirely. Additionally, numerous comments (see examples below) also clarify that the respondents

support legislative action, as well as public outreach and education, to eliminate the use of plastic bags in their community.

“I fully support education to increase awareness of the environmental consequences, and movements to reduce use of plastic bags, but do not believe it should be the role of the government to restrict the use of this product.”

“I oppose charging people if they don't have their own bags, I think requiring paper is awesome though, my family is supported by the timber industry.”

“I strongly support a plastic bag ban, and hope that efforts are made to overturn legislation preventing local communities from banning plastic bags.”

2.3 RESULTS AND DISCUSSIONS

Survey results were analyzed using a variety of applied demographic filters using the software on the survey host website, www.surveymonkey.com. Results below show filtered responses based on respondents' political affiliation and household income.

2.3.1 Political Affiliation

The following results are filtered by political affiliation in order to view any trends in responses in the beliefs and attitudes of respondents regarding plastic bag consumption, legislation, and related environmental, social, and economic concerns. To view data categorized by political affiliation, results were filtered by how respondents answered: “[w]hat is your political affiliation?” The highest category of respondents affiliated with being democratic (42.1%) (Figure 9), which is consistent with the historical voting patterns of Latah County (Section 1.2.4).

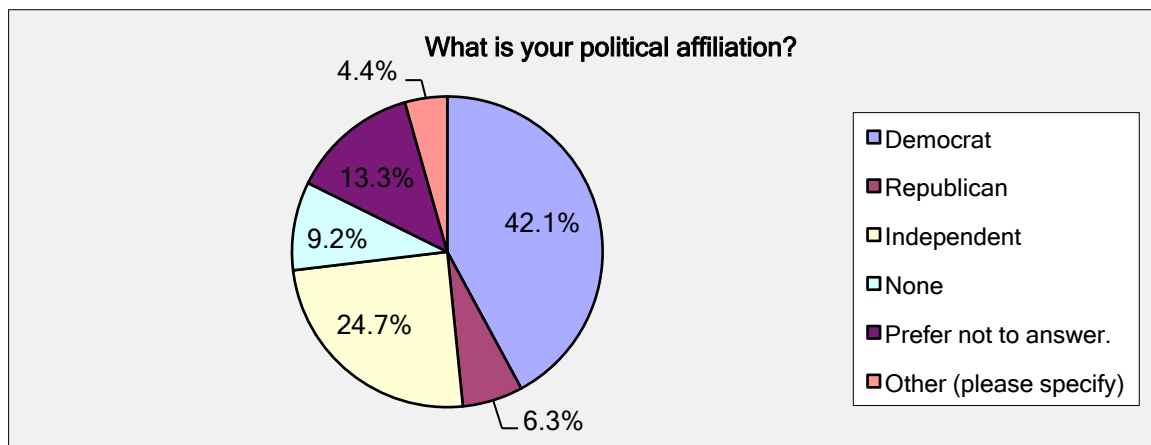


Figure 9. Political Affiliation of Respondents.

Political affiliation differences among respondents also showed differences in their attitudes and behaviors. Democratic survey respondents replied with a higher percentage than republicans in support for legislation of plastic bags (Figure 11) as well as when they were asked if they would voluntarily discontinue usage (Figure 10). These attitudes are consistent with how regions around the nation have voted on and passed plastic bag ordinances.

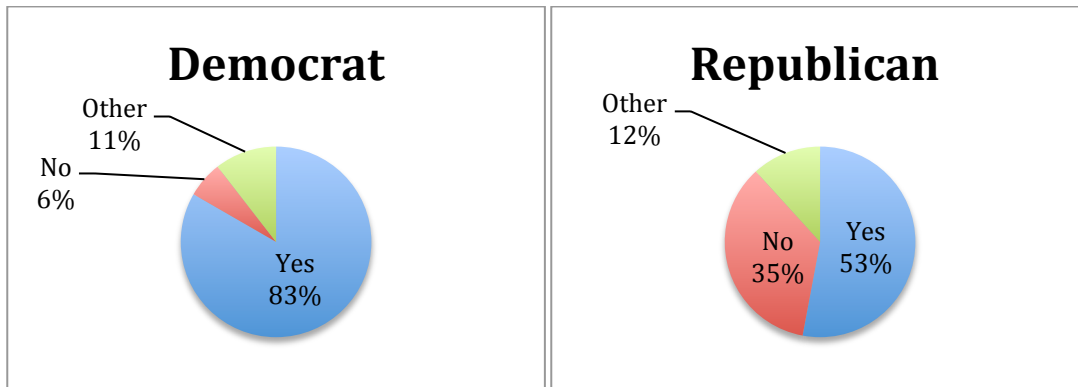


Figure 10. Political Affiliation and Voluntary Compliance. “Would you voluntarily discontinue your use of new disposable plastic bags?” The charts above show the percentage of democratic and republican affiliated respondents that replied “yes,” “no,” and “other.”

HB 372 restricts local government agencies from taking legislative action against the usage of plastic bags, yet the survey results show that the community would likely be in favor of such legislation. Less than ten percent of democratic respondents would not support plastic bag legislation, and although one-third of the republican respondents would not support it, the majority of them answered that they would (Figure 11).

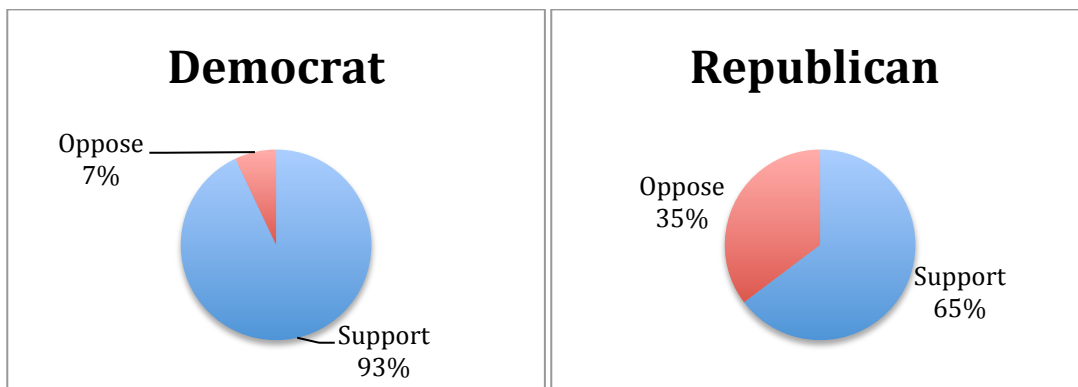


Figure 11. Political Affiliation and Legislation. “Would you support or oppose a law banning disposable plastic bags and requiring stores in your community to offer paper bags (or another alternative)?” The charts above show the percentage of democratic and republican affiliated respondents that replied “support,” or “oppose.”

These results suggest that although predominantly democratic areas may be more in favor for legislation, republican affiliates are not necessarily against government regulation of plastic bags. It is possible that there are additional factors unique to Latah County that influence residents' attitudes towards plastic bag usage while not relating to their political affiliation. When asked “[d]o you feel it is important to reduce the use of plastics, such as plastic bags and bottles, due to their harmful impact on our environment,” the majority of respondents replied yes, regardless of political affiliation (Figure 12).

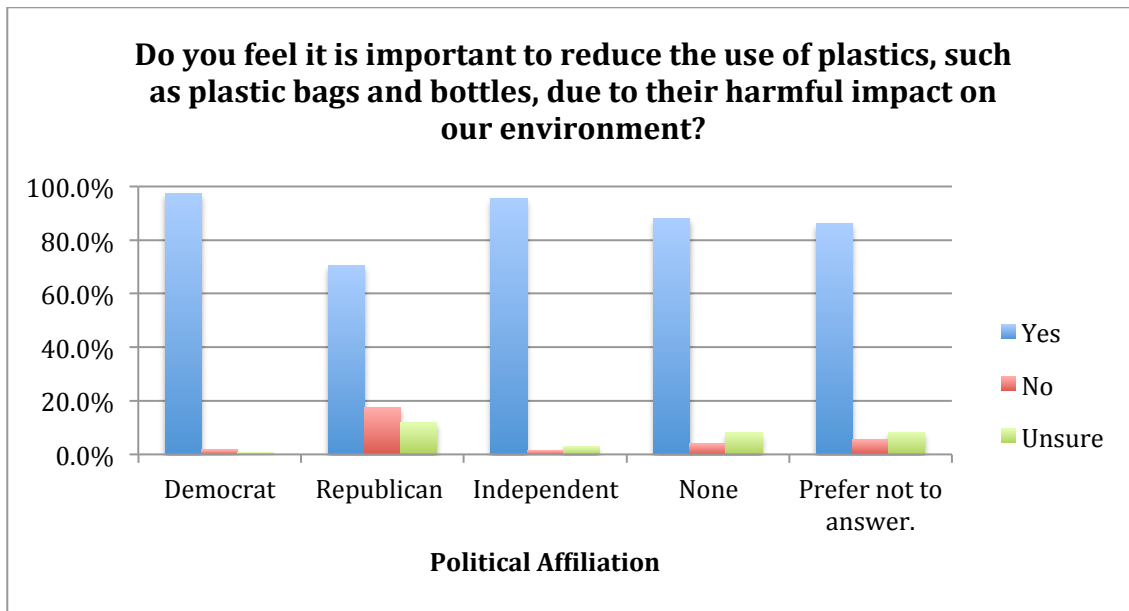


Figure 12. Political Affiliation and Importance of Reduction.

2.3.2 Income

The City of Moscow Sustainable Environment Commission voiced concern during their review of the Pass on Plastic project and survey, that plastic bag legislation could have more severe impacts on low-income community members. Figure 13 shows a breakdown of the household income of the survey respondents. The survey was open April 2016 through October 2016, so to avoid discrepancies between responses, participants were asked to choose a monetary range in which their household income was in last year.

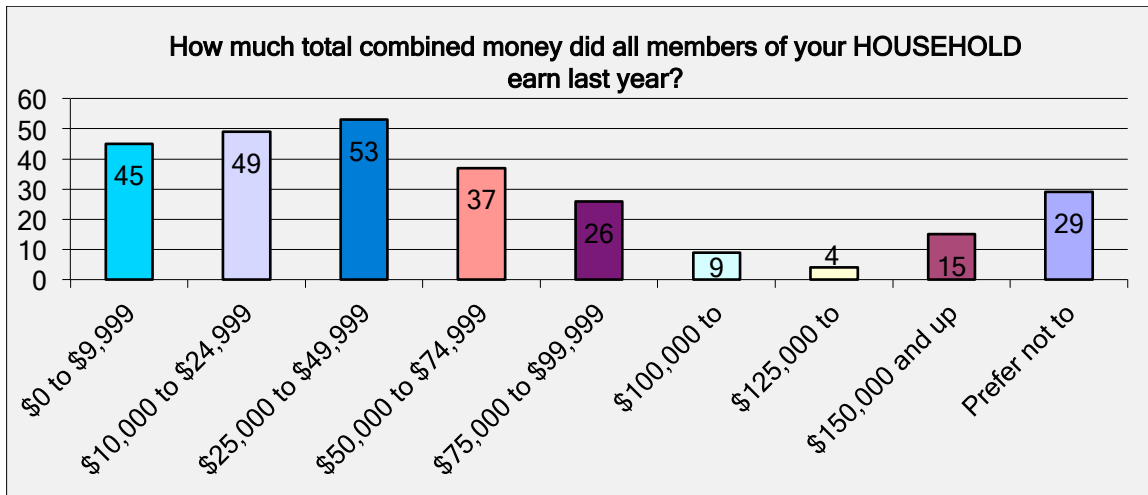


Figure 13. Household Income of Respondents. Respondents were asked to choose from a list of price ranges in which their household income was last year.

Studies around the globe, including Los Angeles, California, and Seattle, Washington, have shown that lower-income households are not more greatly impacted by plastic bag legislation (Campbell & Watson, 2011). Yet, several ordinances still have clauses included that specifically assist those who qualify for programs such as Medicaid, Medicare, Food Stamps, and WIC (S. Walter Packaging, 2016). Additionally, when members of Latah County were asked if they own reusable bags, the majority (regardless of income) responded that they do (Figure 14). This suggests that lower income households have access to alternative resources and would likely not be severely affected by restrictions on plastic bag distribution.



Figure 14. Household Income and Reusable Bags.

Despite the lack of evidence suggesting higher impacts on low-income residents, it was important to understand if there was a trending difference in how participants responded to the survey to show if they had varied opinions on the matter of plastic bags when compared to participants of higher income levels in the Latah County area. The results show that respondents of lower household income brackets have a high percentage of support for plastic bag legislation (Figure 15). This result supports that income does not necessarily reflect the attitudes that a person has towards the governance of plastic bags.

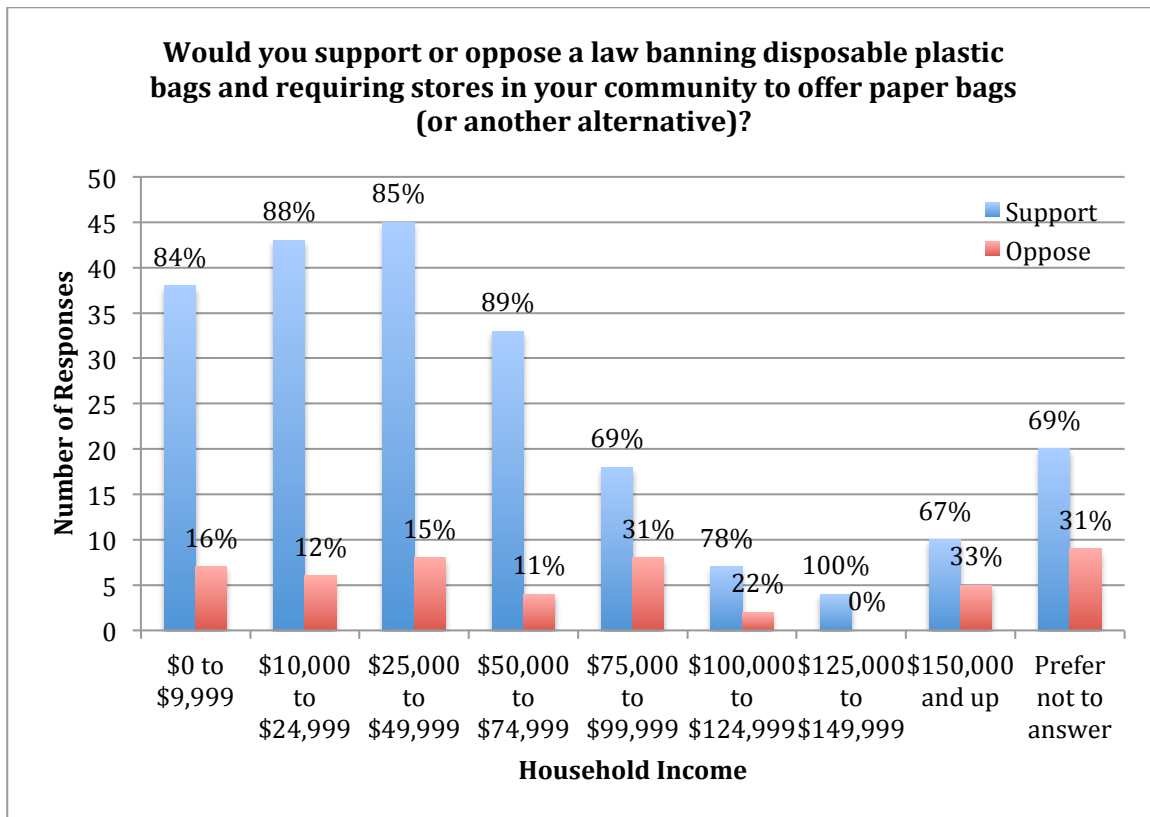


Figure 15. Household Income and Legislation.

2.4 CONCLUSIONS

When surveyed, Latah County respondents reported that they feel it is important to reduce plastic usage (92%), would voluntarily discontinue the use of plastic bags (75%), and support legislation restricting distribution of plastic bags in their community (82%). However, HB 372 restricts local government from enforcing any type of legislation in efforts to reduce or eliminate the use of plastic bags. The survey results suggest that the bill does not represent the attitudes of Latah County residents and therefore restricts their ability to take progressive action in the form of legislation. Additionally, when reviewing survey responses based on

political affiliation, it can be inferred that the community supports the reduction of plastic bag usage despite political affiliation. It was also found that lower-income households would unlikely be negatively affected by a legislative restriction on the distribution of plastic bags in Latah County.

2.5 FUTURE RESEARCH

While local legislation is currently not an option for Idaho, in Latah County voluntary compliance has support and incentives integrated into the community. For example, the Moscow Food Co-op rewards customers with 10 cents for every reusable bag they bring and use while shopping there. Customers can then choose if they would like that amount discounted from their bill or they can choose to donate it to a local cause (Moscow Food Co-op, 2016). The co-op also only offers paper bags for customers who do not have a reusable bag with them. More incentive programs and public outreach would help raise awareness and community support for voluntarily eliminating plastic bags in the community. With the Pass on Plastic survey showing a high response towards support of voluntary compliance in Latah County, success without legislation should not be ruled out.

Although voluntary action is an option, studies have shown that it is not as effective as government enforcement. After conducting research, the Seattle Public Utilities department concluded “some changes to consumer behavior should be expected by education alone, but the changes in consumption of disposable bags are likely to be modest if not combined with a ban or an advanced recovery fee, and the environmental benefits would be minimal” (Campbell & Watson, 2011). Two members of the Idaho State Legislature House representing the Latah County region (District 5) voted on Idaho House Bill 372 in the spring of 2016. the democratic representative voted “nay,” while the republican representative voted “aye” (Idaho Legislature, 2016). Although these representatives voted in accordance with state political affiliation support or opposition trends, the Pass on Plastic survey results suggests regardless of political affiliation, members of Latah County would not be in support of legislation that restricted their local government from passing restrictions on the distribution of plastic bags. In the future, more extensive research on the attitudes and beliefs of residents may help ensure more accurate political representation. A larger-scale survey, gathering responses from a higher percentage of residents may produce different results than the small-scale Pass on

Plastic survey, but without future research, it cannot be concluded either way. Citizens are also encouraged to contact their political representatives to voice their opinions on matters such as HB 372 to increase the likelihood that the attitudes and beliefs are adequately being represented.

2.6 AUTHOR CONTRIBUTIONS

Danielle D. Gentry is the principal investigator and corresponding author. She conducted the survey responses collection, analyzed the results, and wrote the paper.

2.7 CONFLICTS OF INTEREST

The authors have no conflicts of interest.

REFERENCES

- American Legal Publishing Corporation. (2013). Article XXIII. Retail Bag Use. Retrieved from https://www.cityofchicago.org/content/dam/city/depts/bacp/environmentdocs/articlexxiii_retailbaguse.pdf.
- Anaconda Watershed Society. (2008) Anaconda Watershed Trash Reduction Plan. Retrieved from <http://doee.dc.gov/publication/2008-anacostia-river-trash-study>.
- Andrady, A. L., & Neal, M. A. (2009). Applications and societal benefits of plastics. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1526), 1977-1984.
- Barclay, E., 2013. *How Plastic in the Ocean is Contaminating Your Seafood*. Northwest Public Radio. Retrieved from <http://www.npr.org/sections/thesalt/2013/12/12/250438904/how-plastic-in-the-ocean-is-contaminating-your-seafood>.
- Bureau of Planning and Sustainability. (2012). Promoting reusable checkout bags in Portland, One-Year Report.
- Campbell, M., & Watson, L. (2011). Using the Environmental Process to Evaluate Ordinances to Ban Plastic Bags. *NAEP E-News*, 2-8.
- City of Cambridge. (2015) Ordinance Number 1366. Retrieved from <https://www.cambridgema.gov/~media/Files/publicworksdepartment/recyclingandrubbish/byobordinance2016/BYOB%20Ordinance.pdf?la=en>.
- County of Los Angeles. (2010). Single-use plastic and paper carryout bags certify the final environmental impact report, adopt ordinance.

Cózar, A., Echevarría, F., González-Gordillo, J. I., Irigoien, X., Úbeda, B., Hernández-León, S., ... & Fernández-de-Puelles, M. L. (2014). Plastic debris in the open ocean. *Proceedings of the National Academy of Sciences*, *111*(28), 10239-10244.

District of Columbia Official Code. (2015). Subchapter A-1. Anaconda River Clean Up and Protection. Retrieved from http://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Anacostia%20Clean%20Up%20and%20Protection%20Act%20of%202009_3.20.15.pdf.

EPA. (2016). Trash-Free Waters. US Environmental Protection Agency. Retrieved from <https://www.epa.gov/trash-free-waters>.

Fowler Jr, F. J. (2013). *Survey research methods*. Sage publications.

Hopewell, J., Dvorak, R., & Kosior, E. (2009). Plastics recycling: challenges and opportunities. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *364*(1526), 2115-2126.

Idaho. (n.d.). Latah. *Official Website of the State of Idaho*. Retrieved from <https://www.idaho.gov/aboutidaho/county/latah>.

Idaho Legislation. (2016). House Bill 372. <https://legislature.idaho.gov/legislation/2016/H0372.htm>.

Kauffman, C. & Patrick, J., (n.d), Statement of Purpose RS24190. Retrieved from <https://legislature.idaho.gov/legislation/2016/H0372SOP.pdf>.

Koch, W., 2011. Plastic bag ban pits Idaho students against bag maker, USA Today, Nov. 7, 2011. Retrieved from

<http://content.usatoday.com/communities/greenhouse/post/2011/11/plastic-bag-ban-pushed-by-hailey-idaho-students/1#.VrIujDZ6Ghg>.

Larsen, J. & Venkova, S. (2014). The downfall of the plastic bag: a global picture. *Earth Policy Institute, Plan B Updates*. May 01, 2014. Retrieved from http://www.earth-policy.org/plan_b_updates/2014/update123.

Leip, D., (2012). United States Presidential Election Results. Atlas of U.S. Presidential Elections. Retrieved from www.uselectionatlas.org.

M.,J., 2010. *How Many Marine Mammals Did Your Plastic Grocery Bag Kill Today?* Surfrider Foundation. Retrieved from <http://www.care2.com/causes/how-many-marine-mammals-did-your-plastic-grocery-bag-kill-today.html>.

Mid Atlantic Solid Waste Consultants. (2009). 2009 National visible litter survey and litter cost study.

Morris, J. & Chistensen, L. (2014). An evaluation of the effects of California's proposed plastic bag ban. *Reason Foundation, Policy Brief 123, July 2014*.

Moscow Food Co-op. (2016). Dime in time program. Retrieved from <http://www.moscowfood.coop/community-support/>.

National Conference of State Legislatures. (2016). State plastic and paper bag legislation. Retrieved from <http://www.ncsl.org/research/environment-and-natural-resources/plastic-bag-legislation.aspx#2015>.

NBC News. (2016) *Presidential Election Results*. Decision 2012. Retrieved from <http://elections.nbcnews.com/ns/politics/2012/all/president/#.WCP16zs07NU>.

NOVOLEX. (2016). *Sustainability*. Retrieved from <http://novolex.com/sustainability>.

- Padilla, D. (2014). SB 270 Senate Bill Analysis. Retrieved from http://www.leginfo.ca.gov/pub/13-14/bill/sen/sb_0251-0300/sb_270_cfa_20140829_113047_sen_floor.html.
- Petroski, H. (2003). The evolution of the grocery bag. *The American Scholar*, 72(4), 99-111.
- Robinson, J., 2011. *Would-be first plastic bag ban in Idaho goes down*, KPLU 88.5 News for Seattle and the Northwest, Nov. 4, 2011. Retrieved from <http://kplu.org/post/would-be-first-plastic-bag-ban-idaho-goes-down>.
- Rochman, C. M., Browne, M. A., Halpern, B. S., Hentschel, B. T., Hoh, E., Karapanagioti, H. K., ... & Thompson, R. C. (2013). Policy: Classify plastic waste as hazardous. *Nature*, 494(7436), 169-171.
- S. Walter Packaging. (2016) The resource for retail packaging legislation. www.baglaws.com.
- Thompson, R. C., Moore, C. J., Vom Saal, F. S., & Swan, S. H. (2009). Plastics, the environment and human health: current consensus and future trends. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1526), 2153-2166.
- United States Census 2010. (2010). 2010 Census Interactive Population Search. Retrieved from <http://www.census.gov/2010census/popmap/ipmtext.php?fl=06>.
- United States Environmental Protection Agency. (2015) Advancing Sustainable Materials Management: Facts and Figures 2013, Assessing Trends in Material Generation, Recycling and Disposal in the United States.
- Waste Management. (2016). What can I recycle? Retrieved from <http://www.wm.com/thinkgreen/what-can-i-recycle.jsp>.

Yousif, E., & Haddad, R. (2013). Photodegradation and photostabilization of polymers, especially polystyrene: review. *SpringerPlus*, 2(1), 1.

Zbyszewski, M., & Corcoran, P. L. (2011). Distribution and degradation of fresh water plastic particles along the beaches of Lake Huron, Canada. *Water, Air, & Soil Pollution*, 220(1-4), 365-372.

APPENDIX A: LIST OF PLASTIC BAG ORDINANCES IN THE UNITED STATES ^[1]

| State | Jurisdictional Region | Ordinance Effective Year | Population ^[2] |
|----------------------|------------------------------|---------------------------------|----------------------------------|
| California | Malibu | 2009 | 12645 |
| Connecticut | Westport | 2009 | 26391 |
| Hawaii | Kauai County | 2009 | 67091 |
| Alaska | Bethel | 2010 | 6080 |
| Alaska | Hooper Bay | 2010 | 1093 |
| District of Columbia | Washington | 2010 | 601723 |
| North Carolina | Currituck County | 2010 | 23547 |
| North Carolina | Dare County | 2010 | 33920 |
| North Carolina | Hyde County | 2010 | 5810 |
| Washington | Edmonds | 2010 | 39709 |
| California | Calabasas | 2011 | 23058 |
| California | Long Beach | 2011 | 462257 |
| Colorado | Telluride | 2011 | 2325 |
| Hawaii | Mauai County | 2011 | 154834 |
| Maryland | Chestertown | 2011 | 5252 |
| Oregon | Portland | 2011 | 583776 |
| Texas | Brownsville | 2011 | 175023 |
| Texas | Fort Stockton | 2011 | 8283 |
| Alaska | Homer | 2012 | 5003 |
| California | Arroyo Grande | 2012 | |
| California | Atascadero | 2012 | |
| California | Fort Bragg | 2012 | 7273 |
| California | Grover Beach | 2012 | 13156 |
| California | Los Angeles County | 2012 | 9818605 |
| California | Marin County | 2012 | 252409 |
| California | Millbrae | 2012 | 21532 |
| California | Morro Bay | 2012 | 10234 |
| California | Ojai | 2012 | 7461 |
| California | Pasadena | 2012 | 137122 |
| California | Paso Robles | 2012 | |
| California | Pismo Beach | 2012 | 7655 |
| California | San Francisco | 2012 | 805235 |
| California | San Jose | 2012 | 945942 |
| California | San Luis Obispo | 2012 | 45119 |
| California | San Luis Obispo County | 2012 | 45119 |
| California | Santa Clara County | 2012 | 1781642 |
| California | Santa Monica | 2012 | 89736 |
| California | Solano County | 2012 | 413344 |

| | | | |
|------------|---------------------|------|---------|
| California | Watsonville | 2012 | 51199 |
| Colorado | Aspen | 2012 | 6658 |
| Colorado | Cobondale | 2012 | |
| Colorado | Roaring Fork Valley | 2012 | |
| Maryland | Montgomery County | 2012 | 971777 |
| New York | East Hampton | 2012 | 1083 |
| New York | Rye | 2012 | 15720 |
| Texas | South Padre Island | 2012 | 2816 |
| Washington | Bainbridge Island | 2012 | 23025 |
| Washington | Bellingham | 2012 | 80885 |
| Washington | Port Townsend | 2012 | 9113 |
| Washington | Seattle | 2012 | 608660 |
| California | Alameda County | 2013 | 1510271 |
| California | Belmont | 2013 | 25835 |
| California | Berkley County | 2013 | |
| California | Brisbane | 2013 | 4282 |
| California | Burlingame | 2013 | 28806 |
| California | Capitola | 2013 | 9918 |
| California | Carmel By The Sea | 2013 | 3722 |
| California | Carpinteria | 2013 | 13040 |
| California | Colma | 2013 | 97207 |
| California | Corvallis | 2013 | |
| California | Culver City | 2013 | 38883 |
| California | Cupertino | 2013 | 58302 |
| California | Daly City | 2013 | 101123 |
| California | Dana Point | 2013 | 33351 |
| California | Dublin | 2013 | 46036 |
| California | East Palo Alto | 2013 | 28155 |
| California | Emeryville | 2013 | 10080 |
| California | Foster City | 2013 | 30567 |
| California | Fremont | 2013 | 214089 |
| California | Glendale | 2013 | 191719 |
| California | Half Moon Bay | 2013 | 11324 |
| California | Hayward | 2013 | 144186 |
| California | Laguna Beach | 2013 | 22723 |
| California | Livermore | 2013 | 80968 |
| California | Los Altos | 2013 | 28976 |
| California | Mendocino County | 2013 | 894 |
| California | Menlo Park | 2013 | 32026 |
| California | Mill Valley | 2013 | 13903 |
| California | Monterey | 2013 | 27810 |

| | | | |
|---------------|---------------------|------|---------|
| California | Morgan Hill City | 2013 | 37882 |
| California | Mountain View | 2013 | 74066 |
| California | Newark | 2013 | 42573 |
| California | Oakland | 2013 | 390724 |
| California | Pacifica | 2013 | 37234 |
| California | Palo Alto | 2013 | 64403 |
| California | Piedmont | 2013 | 10667 |
| California | Pleasanton | 2013 | 70285 |
| California | Portola Valley | 2013 | 4353 |
| California | Redwood City | 2013 | 76815 |
| California | San Bruno | 2013 | 41114 |
| California | San Carlos | 2013 | 28406 |
| California | San Leandro | 2013 | 84950 |
| California | San Mateo City | 2013 | 718451 |
| California | San Mateo County | 2013 | 718451 |
| California | Santa Cruz | 2013 | 59946 |
| California | South San Francisco | 2013 | 63632 |
| California | Sunnyvale | 2013 | 140081 |
| California | Ukiah County | 2013 | 16075 |
| California | Union City | 2013 | 69515 |
| California | West Hollywood | 2013 | 34399 |
| California | Woodside | 2013 | 5287 |
| Colorado | Boulder City | 2013 | 97385 |
| Colorado | Breckenridge | 2013 | 4540 |
| Illinois | Chicago | 2013 | 2695598 |
| Massachusetts | Brookline | 2013 | 58732 |
| New York | Larchmont | 2013 | 5864 |
| New York | Mamaroneck | 2013 | 18929 |
| Oregon | Corvallis | 2013 | 54462 |
| Oregon | Eugene | 2013 | 156185 |
| Rhode Island | Barrington | 2013 | |
| Texas | Austin | 2013 | 790390 |
| Texas | Freer | 2013 | 2818 |
| Texas | Kermit | 2013 | 5708 |
| Texas | Laguna Vista | 2013 | 3117 |
| Texas | Sunset Valley | 2013 | 749 |
| Washington | Issaquah | 2013 | 30434 |
| Washington | Mukilteo | 2013 | 20254 |
| Arizona | Bisbee | 2014 | 5575 |
| California | Arcata | 2014 | 17231 |
| California | Belvedere | 2014 | 2068 |

| | | | |
|---------------|--------------------|------|---------|
| California | Campbell | 2014 | 39349 |
| California | Cloverdale | 2014 | 8618 |
| California | Cotati | 2014 | 7265 |
| California | Davis City | 2014 | 65622 |
| California | El Cerrito | 2014 | 23549 |
| California | Healdsburg | 2014 | 11254 |
| California | Los Alamos | 2014 | 1890 |
| California | Los Angeles City | 2014 | 3792621 |
| California | Los Gatos | 2014 | 29413 |
| California | Novato | 2014 | 51904 |
| California | Orcutt | 2014 | 28905 |
| California | Palm Springs | 2014 | 44552 |
| California | Petaluma | 2014 | 57941 |
| California | Pittsburg | 2014 | 63264 |
| California | Richmond | 2014 | 103701 |
| California | Rohnert Park | 2014 | 40971 |
| California | Salinas | 2014 | 150441 |
| California | San Pablo | 2014 | 29139 |
| California | San Rafael | 2014 | 57713 |
| California | Santa Barbara | 2014 | 88410 |
| California | Santa Rosa | 2014 | 167815 |
| California | Sausalito | 2014 | 7061 |
| California | Sebastopol | 2014 | 7379 |
| California | Sonoma City | 2014 | 10648 |
| California | Sonoma County | 2014 | 483878 |
| California | South Lake Tahoe | 2014 | 21403 |
| California | South Pasadena | 2014 | 25619 |
| California | Truckee | 2014 | 16180 |
| California | Walnut Creek | 2014 | 64173 |
| California | Windsor | 2014 | 26801 |
| Colorado | Durango | 2014 | 16887 |
| Hawaii | Hawaii County | 2014 | 185079 |
| Hawaii | Honolulu | 2014 | |
| Massachusetts | Great Barrington | 2014 | 2231 |
| Massachusetts | Manchester | 2014 | |
| New Mexico | Santa Fe | 2014 | 67947 |
| New York | Hastings on Hudson | 2014 | 7849 |
| Oregon | Ashland | 2014 | 20078 |
| Washington | Lacey | 2014 | 42393 |
| Washington | Mercer Island | 2014 | 22699 |
| Washington | Olympia | 2014 | 46478 |

| | | | |
|---------------|----------------------|------|---------|
| Washington | Shoreline | 2014 | 53007 |
| Washington | Thurston County | 2014 | 252264 |
| Washington | Tumwater | 2014 | 17371 |
| California | Calistoga | 2015 | 5155 |
| California | Chico | 2015 | 86187 |
| California | Encinitas | 2015 | 59518 |
| California | Fairfax | 2015 | 7441 |
| California | Grass Valley | 2015 | 12860 |
| California | Hercules | 2015 | 24060 |
| California | Indio | 2015 | 76036 |
| California | Manhattan Beach | 2015 | 35135 |
| California | Marina | 2015 | 19718 |
| California | Martinez | 2015 | 35824 |
| California | Monrovia | 2015 | 36590 |
| California | Mountain View | 2015 | 74066 |
| California | Nevada City | 2015 | 3068 |
| California | Pacific Grove | 2015 | 15041 |
| California | Pacifica | 2015 | 37234 |
| California | Pleasant Hill | 2015 | 33152 |
| California | Sacramento | 2015 | 466488 |
| Colorado | Nederland | 2015 | 1445 |
| Colorado | Vail | 2015 | 5305 |
| Hawaii | Oahu | 2015 | |
| Illinois | Evanston | 2015 | 74486 |
| Maine | Portland | 2015 | 66194 |
| Maine | South Portland | 2015 | 25002 |
| Maryland | Prince George County | 2015 | 863420 |
| Massachusetts | Marblehead | 2015 | 19808 |
| Massachusetts | Newburyport | 2015 | 17416 |
| Massachusetts | Provincetown | 2015 | 2642 |
| New Jersey | Longport | 2015 | 895 |
| New Mexico | Silver City | 2015 | 10315 |
| New York | New Paltz Village | 2015 | 6818 |
| Texas | Laredo | 2015 | 236091 |
| California | American Canyon City | 2016 | |
| California | Cathedral City | 2016 | 51200 |
| California | Hermosa Beach | 2016 | 19506 |
| California | Milpitas | 2016 | 66790 |
| California | Sacramento County | 2016 | 1418788 |
| California | San Diego | 2016 | 1307402 |
| California | Santa Barbara County | 2016 | 423895 |

| | | | |
|----------------|-------------------|------|---------|
| Maine | Falmouth | 2016 | 1855 |
| Maine | Freeport | 2016 | 1485 |
| Maine | Kennebunk | 2016 | 1238 |
| Maine | York | 2016 | 3033 |
| Maryland | Takoma Park | 2016 | 16715 |
| Massachusetts | Barnstable | 2016 | 45193 |
| Massachusetts | Bridgewater | 2016 | 7841 |
| Massachusetts | Cambridge | 2016 | 105162 |
| Massachusetts | Chatham | 2016 | 1421 |
| Massachusetts | Concord | 2016 | |
| Massachusetts | Falmouth | 2016 | 3799 |
| Massachusetts | Marwich | 2016 | |
| Massachusetts | Northampton | 2016 | 28549 |
| Massachusetts | Somerville | 2016 | 75754 |
| Massachusetts | Wellesly | 2016 | 27982 |
| New York | New York City | 2016 | 8175133 |
| New York | Patchogue Village | 2016 | 11798 |
| New York | Southampton | 2016 | 3109 |
| Oregon | Forest Grove | 2016 | 21083 |
| South Carolina | Isle of Palms | 2016 | 4133 |
| Texas | Port Aransas | 2016 | 3480 |
| California | Oceanside | 2017 | 167086 |
| Massachusetts | Chilmark | 2017 | |
| Massachusetts | Ipswich | 2017 | 4222 |
| Massachusetts | Lee | 2017 | 2051 |
| Massachusetts | Shrewbury | 2017 | |
| Massachusetts | Tisbury | 2017 | |
| Massachusetts | West Tisbury | 2017 | |
| Michigan | Washtenaw County | 2017 | 344791 |
| Minnesota | Minneapolis | 2017 | 382578 |
| New York | New Cassel | 2017 | 14059 |
| Texas | Eagle Pass | 2017 | 26248 |
| Washington | Tacoma | 2017 | 198397 |
| Colorado | Crested Butte | 2018 | 1487 |
| Massachusetts | Edgartown | 2018 | |
| Massachusetts | Framingham | 2018 | 68318 |
| New York | Suffolk County | 2018 | 1493350 |

[1] References: (National Conference of State Legislatures, 2016), (NOVOLEX, 2016), and (S. Walter Packaging, 2016)

[2] Reference: (United States Census 2010, 2010)

APPENDIX B: PASS ON PLASTIC SURVEY (FILTER: ZIP CODE)

| What type of bags do you use while shopping in your community? | | | | | | |
|---|--------------|------------------|--------------|---------------------|-----------------------|-----------------------|
| Answer Options | Never | Sometimes | Often | All the time | Rating Average | Response Count |
| Disposable Plastic Bags | 45 | 103 | 61 | 35 | 2.35 | 244 |
| Paper Bags | 37 | 139 | 48 | 11 | 2.14 | 235 |
| Reusable Bags | 38 | 72 | 80 | 62 | 2.66 | 252 |
| Other (please specify) | | | | | | 16 |
| <i>answered question</i> | | | | | | 270 |
| <i>skipped question</i> | | | | | | 1 |

| Other (please specify) |
|--|
| my own backpack |
| I re use all kinds of different types of bags! |
| Carry stuff out w/o a bag |
| we almost always use reusables; only use plastic or paper if we forget our reusable bags |
| only rarely I will use a plastic bag. I will re-use them and/or use them to dispose of trash. |
| The only time I use paper or plastic is when I wasn't planning to go shopping and don't have my reusable bags with me. |
| Plastic bags when buying certain vegetables. |
| no bag |
| clothing bags |
| WOVEN STRAW MARKET BAGS |
| Sometimes it is a basket or carry the item in my hands |
| try to carry it w/o a bag |
| no bag |
| When I forget my reusable bags I tend to use paper over plastic |
| none |
| backpack! |

| Do you own any reusable bags? | | |
|--------------------------------------|-------------------------|-----------------------|
| Answer Options | Response Percent | Response Count |
| Yes | 86.7% | 235 |
| No | 13.3% | 36 |
| <i>answered question</i> | | 271 |
| <i>skipped question</i> | | 0 |

If you do get disposable plastic bags from the store, what do you do with them once you are done using them to carry items from that store?

| Answer Options | Never | Sometimes | Often | Always | N/A | Rating Average | Response Count |
|--------------------------|-------|-----------|-------|--------|-----|----------------|----------------|
| Throw them away | 99 | 67 | 8 | 5 | 6 | 1.55 | 185 |
| Recycle them | 47 | 48 | 64 | 41 | 10 | 2.50 | 210 |
| Reuse them in some way | 5 | 10 | 97 | 147 | 4 | 3.49 | 263 |
| <i>answered question</i> | | | | | | | 271 |
| <i>skipped question</i> | | | | | | | 0 |

Do you feel it is important to reduce the use of plastics, such as plastic bags and bottles, due to their harmful impact on our environment?

| Answer Options | Response Percent | Response Count |
|--------------------------|------------------|----------------|
| Yes | 92.3% | 250 |
| No | 3.7% | 10 |
| Unsure | 4.1% | 11 |
| <i>answered question</i> | | 271 |
| <i>skipped question</i> | | 0 |

Would you voluntarily discontinue your use of new disposable plastic bags?

| Answer Options | Response Percent | Response Count |
|--------------------------|------------------|----------------|
| Yes | 75.3% | 204 |
| No | 12.2% | 33 |
| Other (please specify) | 12.5% | 34 |
| <i>answered question</i> | | 271 |
| <i>skipped question</i> | | 0 |

Other (please specify)

I don't want to buy additional garbage can liners

it depends... usually I just reuse bags.

already have

trash bags in my bathroom, or to bring things to a friend's house that I don't expect back

Already do

Only at the grocery store;I use them to pick up dog poop

Only if a free alternative that I didn't have to remember to bring with me was offered

I find plastic bags useful in other areas (bike seat cover, small garbage sacks etc.) if there was an adequate replacement for these uses then probably.

I don't think we can discontinue them entirely. We need them, we (re)use them. They should be made so as to be biodegradable. The non-biodegradable ones should be banned. Period.

I have personal medical issues that require the use of a plastic bag for disposal purposes. Rather than buy the

| |
|--|
| even more plastically content trash bags, I use plastic bags my groceries come in. I wld hate to have to buy regular trash bags. I recycle those I can't use. |
| Please don't tell me what/how I must use these. I reuse them all the time!! |
| We would, but we would need another way to collect our garbage for the dumpster at our condo. |
| I use them to hold & dispose of my (minimal amount of) trash; instead of buying trash bags. |
| Voluntarily reduce use |
| I would like to see truly biodegradable plastic bags. I would reduce the number of plastic bags I use but if I discontinue getting plastic grocery bags I'd have to find an alternative for what I reuse them for. It would probable be plastic. |
| There are times when plastic is the best, realistic choice. |
| If I could find an alternative to line my garbage bin located under the kitchen sink, then I would gladly give them up. |
| I would reduce my use of them |
| I try to do so, but periodically completely forget my bags...I try to do paper bags. I've gotten in the habit of keeping a Costco, heavy duty box in the car to put things in when I don't use a plastic bag, but carry my items out to the car. |
| The only time I need plastic bags is for dog poop. |
| Na |
| Confusing question |
| we use them when purchasing bulk foods; haven't found a practical alternative |
| I would need another way to store trash from the kitchen and in my car. They're especially convenient for inside a car. |
| . |
| gotta have garbage bags... makes less sense to buy those brand new, and more sense to reuse Safeway bags. The new recycling program has let us cut waaaay back on garbage. |
| Because of my lifestyle (mostly not owning a car and being a student) it's really difficult for me to think of not ever using them. If a friend offers me a ride to the store at a convenient moment, I'm going to say yes and go regardless of if I have reusable bags on me. |
| I would consider cutting down the usage but I do use the plastic bags for other things often so I would not cut them out entirely. |
| Probably not only because I re-use them for cleaning the litter box. Completely discontinuing my use would mean spending money to buy, more than likely, disposable plastic bags (just "fancy" ones meant for litter or diaper bags). Which is essentially the same thing. |
| already doing this |
| I use them to scoop up used litter and dispose of litter. |
| Maybe! |
| If I had disposable bags, I would probably use them, but I also don't want to pay for them. |
| maybe |

| Would you support or oppose a law banning disposable plastic bags and requiring stores in your community to offer paper bags (or another alternative)? | | |
|---|-------------------------|-----------------------|
| Answer Options | Response Percent | Response Count |
| Support | 81.9% | 222 |
| Oppose | 18.1% | 49 |
| <i>answered question</i> | | 271 |
| <i>skipped question</i> | | 0 |

| What benefits might your community hope to see from reducing or eliminating the use of disposable plastic bags? (Please check all that apply) | | |
|--|--------------------------|-----------------------|
| Answer Options | Response Percent | Response Count |
| Environmental | 93.0% | 251 |
| Economical | 54.1% | 146 |
| Other | 8.1% | 22 |
| I do not see any benefits from reducing or eliminating the use of plastic bags. | 6.3% | 17 |
| Comments | | 30 |
| | answered question | 270 |
| | skipped question | 1 |

| Comments |
|---|
| I think that banning plastic bags would cause a much larger increase in paper bags which would cause a bigger problem with deforestation . |
| I just think it promotes a down-to-earth and environmentally conscious culture. I love moscow for that reason. |
| bags are a huge cost in the short term for businesses and in the long term for communities. |
| A sense of taking responsibility and working together to best approach the situation on Earth that we are faced with (and that we are co-creators of). |
| People have individual needs around the use of plastic bags. I do not favor either - or decisions. I think educating people about the use of plastics and getting people to reduce or eliminate their use of plastics by making life style changes is best. |
| Fewer plastic bags blowing around the community as litter would be a benefit. |
| I much prefer educating & rewarding citizens for conscientious use of our resources rather than MORE regulations. |
| I don't see a benefit specifically to the Palouse but it is a global issue and we need to have a mindset change:reduce toss-away items/packaging, increase reusable/recyclable/degradable items/ packaging. |

| |
|--|
| It would make our area cleaner and more appealing visually |
| a major reduction in the trash bags flying through the air, adhered to the mud, caught in trees, etc. |
| Eliminating the use of disposable plastic begs would benefit the environment -- fewer bags would be produced and none would enter the landfill or be eaten by animals and it would save money is their production, disposal and recycling. |
| I think the economical gain would come from people buying reusable bags |
| Cities I've been to with plastic bag bans are a lot more aesthetically pleasing. Plastic bags in the wind, on fences and on the ground are really an eye sore, and a piece of litter we could really do without. |
| let's try continuing major educational efforts, with alternatives stressed, a very simplistic approach - maybe way too optimistic |
| Not in Moscow, there won't be any benefits. |
| Support Idaho Forestry! |
| In europe when you have to get a plastic bag you have to pay for it. Paying for it makes people aware that it has an impact and then people will bring their own the next time. |
| i don't think there is much economical benefit to the shopper but it doesn't hurt to have to figure out a new solution to a problem! |

| |
|---|
| social as it CAN ACT AS AN EXAMPLE TO OTHERS |
| CAN ALSO LEAD TO FURTHER BEHAVIOR CHANGE IN TERMS OF REDUCING |
| it just seems like such a simple thing to do...even if people do their best to remember their reusable bags, they forget sometimes. When I lived in a town that banned plastic bags, I only forgot once...that's because I had to make multiple trips to my car to get all of my groceries home. It made an impression and I learned my lesson. |
| Social/community/cultural identity |
| Aesthetic, plastic bags stuck in trees and streams look terrible. |
| Furthering the awareness and education to those not currently up to date with the urgency of which our habits and materials need changing before the impact is irreversible. |
| It's our ethical obligation as citizens of the earth! |
| being more mindful! |
| Awareness of plastic impact on environment. |
| Our community could be a leader in the environmental movement! Eliminating plastic bags would make us so progressive and bring in excellent press for the University of Idaho as well as Moscow! |
| Paper bags would be so much better, please ban the plastic bags! |
| I think that reducing plastic bag use would create a market for reusable bags which is economically beneficial and would also help the environment |
| It would start a conversation about sustainability. |

What potential drawbacks might your community see from reducing or eliminating the use of disposable plastic bags? (Please check all that apply.)

| Answer Options | Response Percent | Response Count |
|--|--------------------------|----------------|
| Environmental Drawbacks | 5.3% | 14 |
| Social Drawbacks | 26.6% | 70 |
| Economic Drawbacks | 28.9% | 76 |
| Other | 9.5% | 25 |
| I do not see any drawbacks from eliminating or reducing plastic bag use. | 44.5% | 117 |
| Comments | | 45 |
| | <i>answered question</i> | 263 |
| | <i>skipped question</i> | 8 |

| Comments |
|--|
| Plastic bags tend to be stronger than paper bags and don't break nearly as often. |
| Worth it, however |
| I think there would be drawbacks, but I think caring about the environment more than it costs is important. |
| Only people complaining |
| People might get angry |
| Just as long as you can carry multiple paper bags like you can plastic, I don't see a problem. Some people have to walk they're groceries home, and most paper bag options at stores don't make that easy. |
| I use plastic bags as trash bags, so if they were all banned then I would have to buy trash bags from the store. |
| Bigger Business criticism |
| What will dog owners put poop in while out walking? |

| |
|---|
| I always reuse them as trash can liners and the like. |
| The local food bank uses disposable bags to put food in for their customers. Not sure what the food bank would use instead of plastic bags. |
| I see limitations on people who are not informed of the harm wasted plastic bags have, and all of a sudden they can't use plastic bags. What would they do? |
| We all know the damage done to the environment because of all that plastic that is EVERYWHERE. It's time to do something. NOW. |
| convenience of something we've gotten used to. Plastic bags can be easier to re-use in some situations. |
| I often buy bulk groceries-- grains, gorp, etc. It would be very inconvenient and messy to substitute paper bags and impossible to use reusable bags for this purpose. |
| People might begin buying more plastic trashbags. People with babies and diapers, people with incontinence and other medical issues wld need a way of disposing w bodily products without contaminating homes and trash systems. People who are low income wld need support to obtain reusable bags. |
| Substantial convenience and ease of use drawbacks |
| convenience, limitation of personal choice |
| The question is confusing the issue by combining reducing/eliminating with regulating; they are two separate issues, as I have described above. |
| If everybody switches to using paper bags, more trees will be cut down. Better to use the European model: don't offer any free bags. If someone doesn't have a reusable bag with them, they can either take one of the used cardboard boxes the store makes available or buy a reusable bag at the checkout. |
| Most common reuse is to pick up after dog on walk. The appeal is that it is disposable and bag shaped. If a more environmentally friendly version of the same disposable bag were a cheap option I woul prefer that. |
| I have been told theft in grocery stores has increased in communities with plastic bag bans. Don't know if it is substantiated. |
| Inconvenience and endless "b*tching" about environmentalist by a few people. |
| It is very convenient to use cloth bags (or other reusable bags) and they are much stronger! |
| If using more paper than using more trees and processing more trees. Yes renewable resource but consider the processing. |
| My main use of disposable plastic bags involves grocery shopping, I've had paper bags rip open numerous times when dry, if it's raining it is even worse. I had plastic bags rip open only a few times and being wet doesn't affect them. I think plastic bags which break down quickly when exposed to the elements, U.V. etc. would be a better alternative to eliminating them. I do however use reusable bags at the farmers' market and I am not opposed th using them for other shopping. |
| I would need to find an alternative for picking up dog poop. |
| The companies might throw a fit but they'll get over it |
| aint nobody gonna give me orders, thats the problem with big gummint nowadays |
| Lifestyle drawbacks. It will be very difficult for lower-middle to lower income people to drink water and eat food. |
| Increased governmental control, reduction of free choice |
| might end up with more road side garbage... |
| PEOPLE MAY FEEL THEY WILL HAVE TO BUY OTHER PLASTIC BAGS TO REPLACE GROCERY SACKS. |
| bags can be useful, but probably not to balance good of eliminating |
| maybe economic for stores that use paper bags right now as they are cheaper |
| People may have judgements toward those not using reusable bags but that doesn't help the problem any. When you do that it only further deters people from wanting to their part. I hope that people will see how easy it is to bring your own bag and that it's not just a trend for some but a way of life. |

| |
|---|
| convenience |
| Cut ties with plastic bag distributors will hurt plastic and petrochemical companies, which must be the next trend in our global economy |
| People probably wouldn't be happy to have to change |
| Plastic bag companies will go out of business |
| I'm sure there are some, but I don't know what they are this early |
| There is a plastic bag manufacturer in Idaho that provides a lot of employment that might go away without plastic bag sales. |
| People would have to think twice about how their actions impact the planet! Oh no! |
| I feel like a lot of people would be really annoyed until they got used to it. I feel that once they got used to it then they would enjoy the use of reusable bags. |
| People are so used to plastic bags it would take some getting used to but it definitely worth it |

| What is your zip code of residence? | |
|-------------------------------------|----------------|
| Answer Options | Response Count |
| | 271 |
| <i>answered question</i> | 271 |
| <i>skipped question</i> | 0 |

| What is your age? | |
|--------------------------|----------------|
| Answer Options | Response Count |
| | 269 |
| <i>answered question</i> | 269 |
| <i>skipped question</i> | 2 |

| What is the highest level of school you have completed or the highest degree you have received? | | |
|---|------------------|----------------|
| Answer Options | Response Percent | Response Count |
| Less than high school degree | 0.8% | 2 |
| High school degree or equivalent (e.g., GED) | 5.3% | 14 |
| Some college but no degree | 32.0% | 85 |
| Associate degree | 7.5% | 20 |
| Bachelor degree | 30.5% | 81 |
| Graduate degree | 24.1% | 64 |
| <i>answered question</i> | | 266 |
| <i>skipped question</i> | | 5 |

How much total combined money did all members of your HOUSEHOLD earn last year?

| Answer Options | Response Percent | Response Count |
|--------------------------|------------------|----------------|
| \$0 to \$9,999 | 16.9% | 45 |
| \$10,000 to \$24,999 | 18.4% | 49 |
| \$25,000 to \$49,999 | 19.9% | 53 |
| \$50,000 to \$74,999 | 13.9% | 37 |
| \$75,000 to \$99,999 | 9.7% | 26 |
| \$100,000 to \$124,999 | 3.4% | 9 |
| \$125,000 to \$149,999 | 1.5% | 4 |
| \$150,000 and up | 5.6% | 15 |
| Prefer not to answer | 10.9% | 29 |
| <i>answered question</i> | | 267 |
| <i>skipped question</i> | | 4 |

Which best describes your current occupation status? (If you are enrolled as a FULL-TIME student and employed, please select student.)

| Answer Options | Response Percent | Response Count |
|--------------------------|------------------|----------------|
| Employed for wages | 21.9% | 59 |
| Self-employed | 3.0% | 8 |
| Homemaker | 1.1% | 3 |
| Management | 4.1% | 11 |
| Government | 4.1% | 11 |
| Student | 48.7% | 131 |
| Retired | 11.9% | 32 |
| Homemaker | 0.7% | 2 |
| Unemployed | 0.7% | 2 |
| Other (please specify) | 3.7% | 10 |
| <i>answered question</i> | | 269 |
| <i>skipped question</i> | | 2 |

Other (please specify)

full-time UI employee

Phd student and instructor

Volunteer and contract work

recycling center

AmeriCorps

16 credit student and I work part time, with volunteer hours

Student and 2 part time jobs

university employee

Non profit employee

| What is your political affiliation? | | |
|--|-------------------------|-----------------------|
| Answer Options | Response Percent | Response Count |
| Democrat | 42.1% | 114 |
| Republican | 6.3% | 17 |
| Independent | 24.7% | 67 |
| None | 9.2% | 25 |
| Prefer not to answer. | 13.3% | 36 |
| Other (please specify) | 4.4% | 12 |
| <i>answered question</i> | | 271 |
| <i>skipped question</i> | | 0 |

| Other (please specify) |
|---|
| far left libertarian/anarchist |
| Libertarian |
| fuck you |
| way left |
| I do no affiliate. Always select the best available candidate for each unique position. |
| Green Party and socialist |
| Centrist |
| I don't think in terms of political parties. |
| Right Wing Democrat |
| UK |
| Bernie Sanders |
| liberal independent/registered democrat |

| Do you have any additional questions or comments regarding plastic bags? | |
|---|-----------------------|
| Answer Options | Response Count |
| | 65 |
| <i>answered question</i> | 65 |
| <i>skipped question</i> | 206 |

| Response Text |
|--|
| When I suggest people to stop using plastic bags, the response is always that they use them on trash cans at home, so they want them in order to save money on buying plastic bags for that purpose. |
| Regarding the use of plastic bottles I think that it is insane the amount of garbage produced. People need to change it. |

| |
|---|
| Thank You |
| N/A |
| Neat |
| I use plastic bags for dog waste but otherwise would use a reusable when shopping |
| Thank you for looking at this! |
| Spread the word on the recyclability of bags AND RECEIPTS! Not all of them are recyclable |
| Reducing bags would be difficult because People are dependent on them to a high degree |
| No |
| Our household uses the plastic bags for so many different uses. We use them for storage, trash bags, disposing of cat litter, Dog messes and even to hold our fresh caught fish, and fresh hunted animals. It is cheaper to reuse them for other purposes than to continuously purchase special plastic bags for those items. When we get an overabundance of them we will put them in the recycling bin. |
| I think an incentive program will find greater support in Moscow than an outright ban |
| I understand that a city in Idaho (Jerome?) is a major manufacturer of plastic bags, which makes our state legislature reluctant to pass a law allowing cities to create their own plastic bag bans. It seems that money overrides the environment among our politicians. |
| I enjoy reusing plastic grocery bags as small garbage can liners. This does put them in landfills, but at least they were used twice, and the ones I don't use, I recycle. I am fairly forgetful so it would take a lot of habit-forming to remember to grab reusable bags for shopping when I left the house, or even the car. |
| Is paper really better than plastic, with all the chemicals that go into paper making? |
| I think it is good to help the community recognize that we don't need to depend on plastic bags for shopping, but i think there needs to be an awareness brought to those who may not particularly care before a strict rule is passed on banning plastic entirely. I think it can be gradual and not forced. |
| This is one small thing to change to undo the damage done to the environment. It's totally painless, it doesn't cost anything. JUST DO IT. |
| Is there any type of bag that is or can be made from recycled materials? What would be used for vegetable bags at stores? Would people still buy plastic garbage bags (which I never buy)? |
| I recycle all plastic bags unless they've been contaminated. |
| It seems that education and practical solutions (eg, making reusable bags widely available at little or no cost) will help people change their mind set and personal habits more than a one size fits all mandate. |
| Taking away these bags is a bad idea. Not only is it an increased inconvenience, it will result in increased costs at stores. It is already nearly impossible to live comfortably. Who needs added expense? |
| Use of these bags should be an individual decision -- not a rule or law. Please do not do this!! And, yes, I recycle, but this should be an option, not a requirement. |
| What is holding up the transition to biodegradable 'plastic' (starch-based)? |
| I always hated plastic bags until 1 day when I changed a light bulb in my pantry on an inadequate stool and I tipped off the stool and was landed safely all because of a bag of plastic bags that served to cushion my fall. So, although I prefer reusable bags, I have respect for that plastic bag pillow! |
| I'm so glad you are doing this. I've been trying to eliminate plastic from my life as much as possible. Plastic grocery bags and food storage containers can easily be avoided; produce bags and lunch baggies are harder to replace. |
| The issue for me is convenience. Both to get my items home and to reuse the bags for dirty work later. I recycle the rest. |
| I have been told that ecologically plastic grocery bags have a lower impact than the plastic grocery bags. So are you not increasing the ecological impact of the area if you ban plastic bags but require stores to provide paper bags? |
| Try to get rid of them! |
| Replacing plastic with paper is not a solution. We need to reduce our use of paper as well. |

| |
|--|
| I hates 'em! |
| I would miss having some plastic bags because I use them for cat litter disposal and lining my kitchen trash can. |
| Nope - good luck! |
| I have used cloth bags for at least 30 years and I would be thrilled to see plastic bags banned! |
| I strongly support a plastic bag ban, and hope that efforts are made to overturn legislation preventing local communities from banning plastic bags. |
| I oppose charging people if they don't have their own bags, I think requiring paper is awesome though, my family is supported by the timber industry. |
| In my chemistry 101 class, after our major exams the professor would do a informative class section the next day of class. Students didn't have to go, but the topics discussed were really interesting. One has always stuck with me. The chemistry behind and the affects plastic v paper bags. You should look into your research how paper bags are actually worse and more tough on the environment then plastic. Sure plastic doesn't decompose for thousands of years and has some serious effects in the ecosystem, but paper requires the cutting down of trees, gas and oil used in almost every aspect from harnessing materials, transportation and even production of creating paper bags. That lecture was quite some time ago but there are thousands of articles talking about the two. Hope that added some perspective and feedback. |
| the film was a real eye-opener, nicely edited to make its point |
| I fully support education to increase awareness of the environmental consequences, and movements to reduce use of plastic bags, but do not believe it should be the role of the government to restrict the use of this product. |
| i just wish we could start by stopping all production of new bags. stop the insanity |
| In the Netherlands I would get charged about a Euro for a single plastic bag. |
| BAN THEM. PERIOD! |
| BAN THEM |
| no, thanks |
| Despite this completely ridiculous law, I hope that we can come up with a way for the stores in Moscow to just opt out of supplying plastic bags to their customers. Or at least maybe charge for them? I'll be curious to hear what your survey finds! |
| try optional non-use before law |
| Nope |
| Lets be progressive like Hawaii and ban plastic bag use!!!!!! |
| Charge \$0.05 for plastic bags. |
| none |
| I think that it would be of great environmental benefit to ban plastic bags. I would like to see it done in this state! |
| Let's do this! |
| I find it odd that you are asking about political affiliation and income...it seems odd. Thanks. |
| thanks for spreading awareness! |
| Plastic is definitely a menance to the society. We all should contribute to reduce the use of Plastic Bags and for the same cause I do and I will continue to refuse use them. |
| Government should ban plastic bags and produce and promote more eco friendly bags manufacturers |
| I hope this gets implemented in the Moscow community. |
| In some European countries, they simply charge for plastic bags. |
| the revolution is upon us. |
| Thanks you for doing this statistical survey. |
| Keep up the good work with bringing this issue to the public! |

| |
|--|
| Nope |
| SAY NO TO PLASTIC!! |
| I would love to help! |
| I love the Idea of plastic bag bans, they are trying to work on one in my home town too. I think they are great |
| NO |
| I believe that people would use reusable bags if they are the right kind and they think they are attractive. For example, it is more convenient to have reusable bags that compact so you can keep them in a purse, car, or book bag. Part of the problem is that folks go to the store unplanned (example: after work people stop at the store for dinner). When they do this they might not have their reusable bag unless they have a compatible one in their purse or car. |